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NORTHWEST POWER PLANNING COUNCIL

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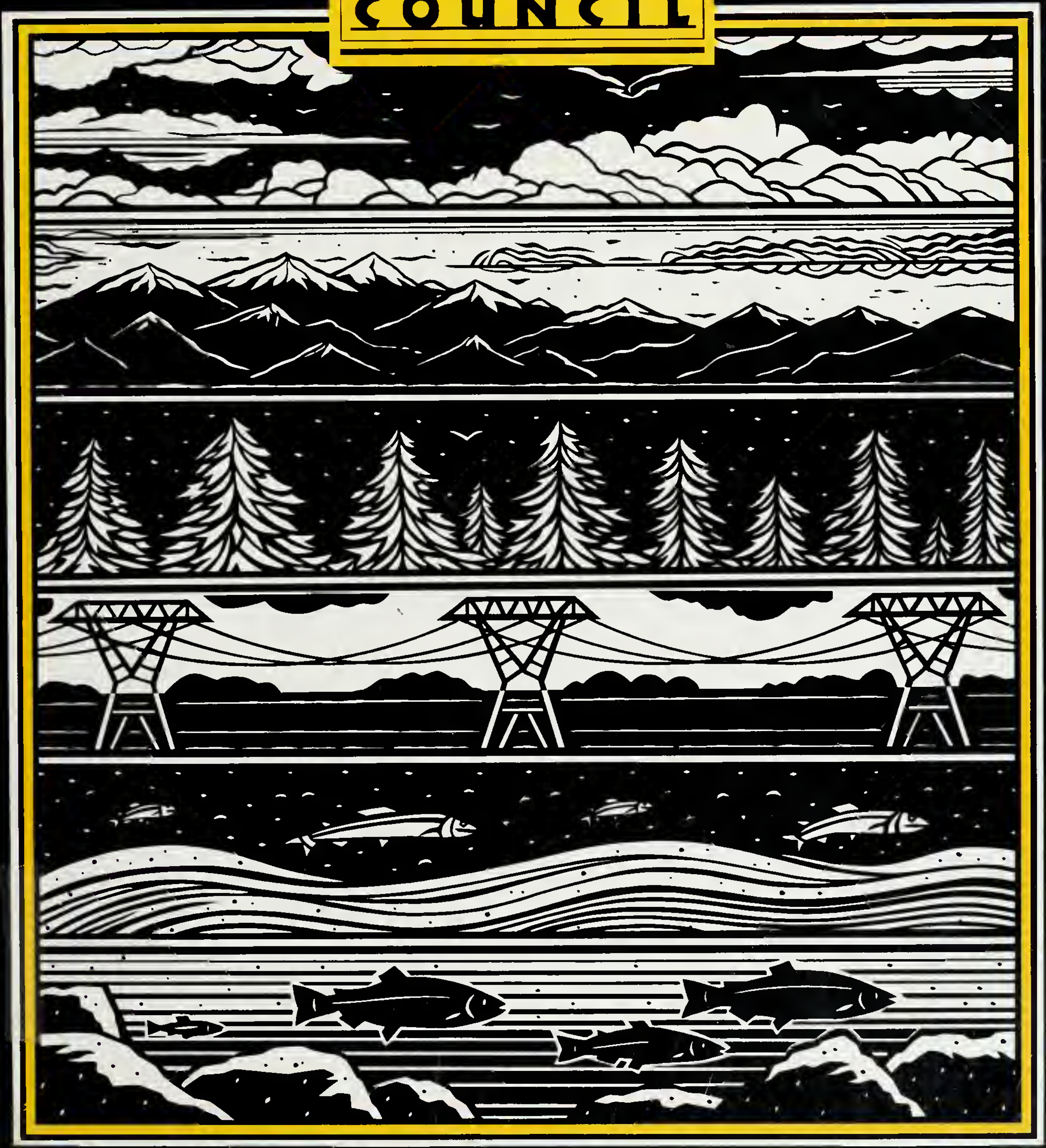

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SIXTH ANNUAL REPORT
# of the
PACIFIC NORTHWEST ELECTRIC POWER AND CONSERVATION PLANNING COUNCIL

OCTOBER 1, 1985, THROUGH SEPTEMBER 30, 1986

Submitted to the
Committee on Energy and Natural Resources
United States Senate
Committee on Energy and Commerce
United States House of Representatives
and the
Committee on Interior and Insular Affairs
United States House of Representatives

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This annual report has been developed pursuant to Sec. 4(h)(12)(A) of the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Public Law 96-501). While the Act requires only a report of the Council's fish and wildlife activities, the Council has elected to include its power planning, public involvement, legal and administrative activities as well.

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THE NORTHWEST POWER PLANNING COUNCIL

The Pacific Northwest Electric Power Planning and Conservation Act of 1980 (PL 96-501–referred to as the Northwest Power Act or the Act) authorized the states of Idaho, Montana, Oregon and Washington to enter into an interstate compact for the purpose of planning for and protection of the region's electrical power and fish and wildlife resources. The planning body formed as a result of that compact is the Pacific Northwest Electric Power and Conservation Planning Council--commonly known as the Northwest Power Planning Council.

The Northwest Power Act granted the Bonneville Power Administration, the region's federal power marketing agency, new authority to acquire conservation and generating resources. To protect the interests of the Northwest states, whose ratepayers fund Bonneville, the Act also authorized the compact that led to the Council's creation.

To this end, the Council was established to provide the region with a publicly accountable body that gives the Northwest states and their ratepayers a voice in the region's energy planning and Columbia River Basin fish and wildlife activities. Following enabling legislation in their individual states, the governors of the four Northwest states each appointed two members to the Council. These Council members are supported by a central staff of 43 people, in addition to smaller staffs in each state's office. Central headquarters for the Council are in Portland, Oregon. Divisions of the Council include power planning, fish and wildlife, public information and involvement, legal and administration. The Council is not a federal agency nor is it part of the Bonneville Power Administration, although it is funded from Bonneville rate revenues.

Congress gave the Council three major charges. First, the Council was to determine how much electric energy the region will need over the next 20 years and to develop an electric power plan to meet those needs at the lowest cost to the region. Second, the Council was to develop a program to protect and restore fish and wildlife in the Columbia River Basin that had been affected by hydroelectric development and operations. Third, the Council was to develop and maintain a comprehensive public involvement process to obtain public participation in its decision-making processes.

Under the Northwest Power Act, both the Northwest Power Plan and the Columbia River Basin Fish and Wildlife Program must be reviewed at least every five years. Both the plan and the program have Action Plans that identify near-term objectives and measures for the Bonneville Power Administration and other affected agencies to carry out in order to achieve the overall goals of the plan and program.

THE COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM

The Columbia River Basin long supported one of the world's most extensive salmon and steelhead populations. Now the basin is used as one of the world's most valuable hydropower resources. The salmon and steelhead, which must navigate the river to the ocean and back, suffered enormous losses as, one after another, the dams began to channel and obstruct their passage. The once free-flowing river was turned into a series of lakes whose more sluggish waters slowed the migration of fish, thus increasing their susceptibility to disease and predators. In 1980, there was concern that some Columbia River Basin salmon and steelhead runs might be eliminated altogether. The Northwest Power Act was enacted, in part, to prevent this.

The Northwest Power Act requires that equitable treatment be provided for Columbia Basin fish and wildlife along with the other purposes for which the hydroelectric system is operated. The Act required that the Council strike a balance between fish and wildlife needs and electrical power interests. The intent was to ensure for the region an economical and reliable power supply, while giving equal consideration to fish and wildlife needs at all stages of power planning and decision making. The Act also stipulated that hydropower ratepayers must fund the projects designed to redress the detrimental effects of hydropower development and operation on fish and wildlife in the basin.

The Council developed the Columbia River Basin Fish and Wildlife Program in 1982. Following the direction of the Northwest Power Act, the program was based on recommendations provided by the state and federal fish and wildlife agencies, Indian tribes in the basin, power interests and others.

In 1984, the Council amended the program, and a second amendment process is under way at this time. The program, at Congress' urging, treats the Columbia Basin as an integrated system. It is likely one of the most comprehensive restorations of a natural resource in the world. While the basin's anadromous fish (primarily ocean-migrating salmon and steelhead) are a primary focus in the program, resident fish, which do not travel to the ocean, and other wildlife also are addressed.

In its 1982 program, the Council called for swift remedial action to save the remaining fish runs, within the limit of ratepayer responsibility. Last year, the Council undertook a major effort to quantify salmon and steelhead losses in the basin since hydropower development and operation began, and to determine the portion of those losses that can be attributed to hydropower. This information will help provide a foundation for a series of system policies and subbasin plans that, when completed, will guide the fish restoration efforts.

All of the work noted above is covered in greater depth in the detailed sections that follow.

THE NORTHWEST POWER PLAN

The Council's Northwest Power Plan is designed to ensure that the region has an adequate and reliable supply of electrical power over the next 20 years at the lowest cost to the region. Preserving the region's low-cost electricity, which is approximately half the cost of electricity in the rest of the nation, is vital to the Northwest's economy. The Council's first plan was completed in 1983. Because of a number of changes in the regional electrical energy picture, a new power plan was adopted in January 1986.

The first element of the power plan is a forecast of future electrical power needs. Because the future is uncertain, the Council has developed a range of likely power loads that is bounded by high growth (which would have the region's employment grow at a rate 130 percent faster than the nation's highest projected growth) and by a low growth rate (employment would be 40 percent below the national rate). Within this broad range are medium-high and medium-low projections, and it is within this narrower range that growth is more likely to occur.

To determine what additional future resources will be needed to meet any potential growth, the Council developed a portfolio of resources, taking into account environmental considerations. This portfolio includes a schedule showing what resources must be developed, in what amounts and when. As the region's power demand grows, the most cost-effective resources will be developed first. In the 1986 Power Plan, the sequence of resources is conservation first, followed by improvements in hydropower efficiency, strategies to better use the existing hydropower system (firming up nonfirm power), new small hydropower facilities at existing water projects, cogeneration and--the last resource--coal.

The Council's power plan places heavy emphasis on managing risk to protect the Northwest's energy supply and to reduce costs. Energy conservation is given priority as the most flexible resource, because it can be developed in increments and "used" almost immediately. Smaller resources with lower capital costs are also preferred for their flexibility.

The Council has also developed an "options" approach to resources. This allows the region to purchase an option on a resource and take it through the relatively inexpensive but time-consuming stages of licensing, siting and design. Then the resource can either be developed, held in reserve or terminated depending on the need for energy. This protects the region from committing huge financial resources far ahead of the determination of actual energy demand.

FISCAL YEAR 1986

The Northwest Power Planning Council's fifth anniversary year was a momentous one for the regional planning body. Among major milestones during 1986, the Council's constitutionality was upheld by the United States Court of Appeals for the Ninth Circuit; the Council issued its new 1986 Northwest Power Plan, and work was begun to amend the Council's Columbia River Basin Fish and Wildlife Program. All of these events, along with other important developments, are covered in more detail in this 1986 Annual Report to the U.S. Congress, for the year of October 1, 1985, through September 30, 1986.

In addition, in 1986 there were changes in the Council's membership. Both Charles Collins of Washington and Leroy Hemmingway of Oregon retired from the Council. They were replaced respectively by Tom Trulove and Robert Duncan. Trulove becomes the Council's first eastern Washington representative, reflecting a new Washington state law requiring that one of the state's two representatives must be from the western section of the state and the other from the eastern section (as divided by the Cascade mountain range).

Trulove, who resigned his job as mayor of Cheney, Washington, to join the Council, is a professor of economics at Eastern Washington University. He is currently on leave from that position.

Duncan is a familiar face in both Oregon and national politics, having served in the Oregon House of Representatives and the U.S. House of Representatives for a span of 16 years. After leaving Congress in 1980, he joined a Portland, Oregon-based law firm, from which he retired at the end of 1985 to live in Yachats Oregon.

Robert Saxvik of Idaho is currently chairman of the Council, and Kai Lee of Washington is vice chairman.

Of all developments during the year, no event had more long-term significance than the Ninth Circuit ruling. The Court upheld both the constitutionality of the Council and the validity of the Council's Northwest Power Plan which, according to a directive in the Northwest Power Act, includes model conservation standards to produce more energy efficient buildings. These standards and the Council's constitutional authority to develop them were the focus of a suit brought by a group of homebuilders in July 1983. Subsequently, the constitutionality question in the suit drew more attention, as both the U.S. Department of Energy and the Bonneville Power Administration sought intervention by the U.S. Department of Justice early in 1985. Full details are in the legal section of this report, along with excerpts from the Ninth Circuit decision in Appendix C of this document.

MAJOR 1986 FISH AND WILDLIFE ACTIVITIES

The Council advanced the Columbia River Basin Fish and Wildlife Program in three primary areas this year. First, ongoing implementation of program measures was monitored and coordinated by the Council. Second, the Council directed the single most comprehensive study of salmon and steelhead losses in the Columbia River Basin as a result of hydropower development and operation. This work involved estimating losses and assigning a cap to the amount of salmon and steelhead restoration that can be considered the responsibility of the region's hydropower ratepayers. This effort is part of a larger study to develop a framework for the salmon and steelhead portion of the fish and wildlife program. The third major emphasis this year has been the amendment process for the fish and wildlife program.

Program implementation has included state and federal fish and wildlife agencies, Indian tribes in the basin, the U.S. Army Corps of Engineers, the Bureau of Reclamation, the Bonneville Power Administration, the Federal Energy Regulatory Commission and other organizations taking action on the measures contained in the program's five-year action plan. The Council tracks this work with quarterly reports that are available to interested members of congressional staffs and to the general public on request from the Council's central office. Cover letters noting key implementation issues and a summary of completed program measures are contained in Appendix D.

This year, the fish and wildlife staff developed and circulated issue papers on the appropriate level of spill at mainstem U.S. Army Corps of Engineers' dams; wildlife mitigation for Hungry Horse Dam; hydropower responsibility for salmon and steelhead losses in the basin; salmon and steelhead planning and research; computer modeling; and genetic considerations in salmon and steelhead planning. All were designed to inform and solicit comment from interested experts and members of the public.

The staff also met regularly with several advisory committees (see public information section, page 48) over the past year to discuss specific aspects of the fish and wildlife program and call on experts in the field to advise the Council.

FISH AND WILDLIFE PROGRAM: FIVE-YEAR ACTION PLAN IMPLEMENTATION

Congress has called for annual reports on the Columbia River Basin Fish and Wildlife Program to evaluate the effectiveness of this major ratepayer-funded restoration effort. But the Columbia River Basin is an enormous ecosystem, interacting with even larger and more complex systems in the ocean. The management of fish and wildlife in this ecosystem is the shared responsibility of several organizations. Moreover, the life cycles of salmon and steelhead runs are generally 4-5 years, so that measuring the effects of human interventions to rebuild fish runs cannot be accomplished in the short term. As a result, it is difficult to quantify the effects of the Council's program at this point. It is, however, a Council priority to develop ways to monitor and evaluate the program's effectiveness and to continue to report in the meantime on the progress made in its implementation. This section covers key points in that process. For more detailed analysis, contact the Council's central office for copies of the fish and wildlife division's quarterly reports. Key points from these reports are in Appendix D.

Mainstem Passage

A top priority of the Council's program is to correct passage problems relating to juvenile fish migrating downstream at each of the dams on the mainstem of the Columbia River. To rebuild upriver runs of anadromous fish and protect the ratepayer investment in those runs, obstacles to fish migration must be overcome. While there are many elements involved in improving the chances for fish survival on the mainstem, the water budget and fish passage improvements at each of the dams are the two most critical.

Water budget: The water budget is a block of water set aside for use during the April 15 to June 15 spring smolt migration. It is used to increase flows below Priest Rapids Dam on the Columbia and Lower Granite Dam on the Snake River. These flows take the place of the spring freshet that, before the dams were built, carried young salmon and steelhead from their spawning grounds to the sea in less than a month.

Good flow conditions, resulting at least in part from good natural runoff conditions, aided fish migrations in 1986. The fish and wildlife agencies, Indian tribes, Corps, Bonneville, Council and others continued to address disputes over hydrological, institutional and other types of problems related to implementation of the water budget. Some of those problems are being considered in the program amendment proceedings addressed below.

Because there is limited water storage available on the Snake River, a large portion of its water budget is made up of uncontrolled natural runoff. This year, stored water was made available at Dworshak Dam on the North Fork of the Clearwater River to provide Snake River flows. However, because of an adequate runoff in Idaho during much of the water budget season, requests for flows to aid the young fish were not necessary.

Nonetheless, the absence of long-term commitments by project operators in the Snake River Basin to assist in providing water budget flows, means the Snake River water budget may not be adequate in low runoff years. The Idaho Power Company and the Bonneville Power Administration are currently negotiating a storage and energy exchange agreement, which may improve this situation.

On October 18, 1985, Bonneville submitted its fiscal year 1986 work plan, which included a budget for funding water budget measures through fiscal year 1989. While this budget appears adequate, there is still concern about Bonneville's long-term funding and the future institutional structure for water budget research and smolt monitoring activities.

Fish passage improvements: Capital improvements for fish passage on mainstem Columbia and Snake river dams are continuing. The U.S. Army Corps of Engineers has juvenile fish bypass facilities in place at Bonneville, John Day, McNary, Little Goose and Lower Granite dams. Ice Harbor and The Dalles dams have sluiceways that are operated as juvenile bypasses. These two dams also have biological and prototype studies under way to investigate installation of partial turbine screening systems. Lower Monumental Dam is undergoing the same studies.

The poor functioning of the new bypass system at Bonneville Dam's second powerhouse continues to be an enigma for the Corps, which has been working with fish and wildlife agencies and Indian tribes to discover why juvenile fish are not successfully guided away from the dam's turbines. The Corps is conducting prototype screen modification tests and extensive turbine intake alterations at the second powerhouse in an effort to improve fish guidance at the dam.

Upriver at The Dalles Dam, the Corps has completed installation of a fish counting facility and modified the dam's north shore fish ladder to aid the upstream migration of adult salmon and steelhead. The fish ladder improvements are more than three years ahead of schedule. However, also at The Dalles, results from prototype testing of submersible traveling screens to divert juvenile migrants away from one turbine unit were disappointing, prompting the Corps to continue testing in 1986, before making major dam modifications. This added prototype testing may delay retrofitting that dam as much as three years behind the schedule in the fish and wildlife program.

The John Day Dam was a busy construction site in 1985 and 1986, and this is likely to continue through March 1987. In 1985 the Corps installed 27 submersible traveling screens in powerhouse units one through nine, and constructed a 1,500-foot juvenile fish bypass channel to the tailrace of the dam. Screening of three more units was completed early in 1986. The four remaining powerhouse units are approximately one year behind schedule, because none of the bids the Corps received came within budget limitations.

The Corps and the National Marine Fisheries Service are testing McNary Dam's permanent bypass system's effectiveness for summer migrants. McNary has successfully bypassed juvenile spring migrants in the past, and it may hold a key to solving passage problems at other mainstem projects.

In 1986, prototype screens are being tested by the Corps at Lower Monumental Dam. Similar prototype screen tests for Ice Harbor Dam were scheduled in the program to be conducted in 1985. However, the Corps did not conduct these tests in 1985, or in 1986, despite the fact that the Council was successful in obtaining funds for these tests in fiscal year 1986. Also the Corps indicated there were no screens available and they could not find an inadequate number of researchers to conduct the prototype tests. Consequently, the testing is now scheduled for 1987 with reports on the work due in 1988.

At Little Goose Dam, the Corps is considering gate raise modifications and alternative bypass channel designs to improve the present juvenile fish bypass system. Major modifications to the bypass and collection systems at the dam are not expected to be completed until 1989. Feasibility studies to upgrade the fish bypass system at Lower Granite Dam are scheduled to be completed this year, with a Corps-scheduled deadline for completion of the gate raise modifications by April 1989.

The five dams in the mid-Columbia region are owned and operated by public utility districts (PUDs). They were all parties to a legal proceeding which was stipulated by the Federal Energy Regulatory Commission (FERC) in 1984. This settlement, called the Mid-Columbia Settlement Agreement, specified certain biological and prototype bypass tests and modifications and interim spill levels at each of the four dams on which there was agreement among the parties--Priest Rapids, Wanapum, Rocky Reach and Wells dams. Rock Island Dam, the oldest mainstem project, was not covered by the settlement. In 1986, a FERC administrative law judge ruled that Rock Island Dam must continue efforts to develop a permanent bypass and screening system, and that Chelan County PUD, the dam's operator, must conduct further tests to determine long-term mitigation and compensation strategies at both powerhouses at the dam.

Grant County PUD, owner and operator of Priest Rapids and Wanapum dams, is developing and testing a prototype juvenile fish screening and bypass system for Priest Rapids Dam. The permanent bypass system is scheduled for completion by March 20, 1988.

At Wanapum Dam, Grant PUD is testing, evaluating and developing an enhanced spill program for juvenile fish using a 1,400 to 1,600-foot barrier net in the dam's forebay to guide young fish away from the turbine intakes. This system is on the same schedule as the Priest Rapids project.

Prototype juvenile fish bypass systems also are being tested in 1986 at Rocky Reach Dam, where results from 1985 prototype screen testing were discouraging. FERC has ordered Chelan County PUD, the dam's operators, to accelerate development of the bypass system and attempt to have it completed and operational in 1987. Due to problems experienced in prototype screen testing, it is doubtful that a permanent bypass system will be installed and operational by 1987.

Modifications at Douglas County's Wells Dam should be completed in 1988. The PUD is installing and testing additional spillbay modifications designed to provide enhanced non-turbine passage of juvenile fish through spill.

Mainstem spill decision: In February, the Council voted to amend the fish and wildlife program to extend the period during which water is released, or "spilled," from Corps-operated dams on the mainstem Columbia and Snake rivers. The action extends the spill season to release water to aid juvenile fish in their downstream migration through August 15, if necessary. This spreads the benefits of spill to offer protection to wild and natural summer and fall chinook runs. The amended program measure still requires a minimum 90 percent juvenile fish survival rate at seven mainstem Corps dams but now covers 80 percent of the spring and summer downstream migrations. The basin fishery agencies and Indian tribes had argued for a higher rate of spill, but the Council rejected their proposal, because it could not determine that increased spill levels would result in significant biological benefit to anadromous fish. In the Council's current fish and wildlife program amendment proceedings, fish and wildlife agencies and tribes have again submitted their proposal for higher spill levels.

The Council's mainstem amendment called on the fishery agencies and tribes to establish criteria that would set the spring and summer spill periods to include 80 percent of the typical migrations, the daily hours of spill and the numbers of fish that will trigger spill operations. The tribes and agencies did so, but, in its implementation of the 1986 spill program, the Corps accepted some of the spill criteria and implemented some criteria of its own. In the Council's opinion, the Corps explained why it did not adopt the criteria of the fish and wildlife agencies and tribes but did not explain why their criteria were impracticable, as called for in Section 4 (h)11 of the Northwest Power Act.

The basin's fish agencies and tribes have raised a number of concerns about the implementation of the water budget and other fish passage measures in the program. The Council has scheduled an oversight hearing to review these concerns as part of its November 1986 Council meeting.

Production Capability

The Council, in its staff report on Columbia River Basin salmon and steelhead losses, estimated that more than one-third of the basin's salmon and steelhead spawning and rearing habitat was lost due to hydroelectric development. While fish hatcheries developed in the basin in the past have helped to maintain salmon and steelhead populations, they also may promote certain genetic characteristics that could weaken the species over time. Consequently, the Council is studying the genetic considerations that are important in planning for salmon and steelhead production.

In the fish and wildlife program's five-year action plan, priority was given to restoring spawning habitat and removing certain blockages that bar wild and natural salmon and steelhead from otherwise usable habitat. Such habitat improvements are ongoing in three of the four Northwest states (Montana no longer has anadromous fish runs), but the work to open passage into the upper Yakima River Basin in Washington state has been given special emphasis.

The Yakima Basin was once home to over half a million adult salmon and steelhead. As recently as 1979, that number had been reduced to only 2,000 fish. The 1986 spring chinook run was recorded at 9,300 returning adults. Fish passage improvements share the credit for this success with better water management practices and the water budget on the Columbia.

With Bonneville funding and congressional appropriations for passage improvements in the basin, the Bureau of Reclamation has worked with Yakima tribal representatives, fish agencies, Yakima irrigation farmers and others to conduct passage improvements throughout the Yakima Basin. To date, more than $15 million has been spent on 20 separate project improvements. Fish ladders and/or screens have been completed at the Naches-Cowiche, Horn Rapids, Sunnyside, Wapato, Toppenish/Satus and Prosser diversion dams. Further work is in design or construction stages on the remaining 14 projects. Total estimated costs of all of the improvements is $46 million. A chart describing the status of work at all 20 projects is contained in Appendix D.

The Yakima Basin also will be the site of a major salmon and steelhead hatchery outplanting facility. The Council has contracted for the design of a master plan proposal for the facility, which will provide information about possible release sites for the fish; a detailed production plan with numbers of young fish produced; and expected annual returns from the releases. A conceptual design of the facilities, proposed management policies and procedures, and a process for monitoring and evaluating the project are also being developed.

Protection from New Hydroelectric Development

Hydropower licensing: In November 1985, the Federal Energy Regulatory Commission, which is responsible for licensing non-federal dams, opened a Northwest regional office in Portland, Oregon. The Council applauds the move, because FERC's presence within the region should enable FERC to better participate with other major implementers of the fish and wildlife program and to better understand the energy and natural resources situation in the region.

FERC's participation is especially necessary because of the huge number of applications for new hydroelectric facilities that are pending. Without FERC cooperation, fish and wildlife in the basin could face new threats from additional dams, just as ratepayer efforts are beginning to replace fish lost because of the existing dams.

At least two important FERC decisions in 1986 indicate the commission's support for the fish and wildlife program. (See section on legal actions for further discussion.) The Rock Island Dam decision, already mentioned, included statements by a FERC administrative law judge regarding the "equitable treatment" language contained in the Northwest Power Act. This language, the FERC judge noted, "suggests fisheries and power production on the Columbia River should not be balanced solely by a cost-benefit analysis." The costs of protecting the existing and future fish runs are relatively small, FERC concluded, when compared to the long-term benefits of sustaining those runs and to the long-term benefits of inexpensive power generation.

In another decision, FERC rescinded the Okanogan Public Utility District's license to operate a hydroelectric facility at the site of the Enloe Dam on the Similkameen River in northern Washington. The FERC decision in this case requires Okanogan to complete studies regarding protection for fish runs on the Similkameen before the licensing request will again be considered. FERC concluded that it had issued the previous license prematurely.

However, the Council has expressed concern with FERC's Snohomish Basin Cumulative Impact Assessment Procedure Draft Environmental Impact Statement. The draft presents a need for power that the Council believes is inaccurate due to the current surplus of unsold power in the region. The Council has urged FERC to reconsider issuing new hydropower licenses until a regional need for power exists.

Hydropower Assessment Study: The Council began a study in 1984 to: 1) identify areas in the Columbia River Basin that should be protected from hydroelectric development; 2) rank hydroelectric sites throughout the region based on their fish and wildlife values;[1] and 3) identify other environmental constraints to hydroelectric development to provide a more accurate estimate of hydropower potential within the region for use in developing the 20-year power plan portfolio of resources (see page 34). This hydropower assessment study has three key components: collection of available data on the anadromous fish (primarily salmon and steelhead trout) in the region; collection of data on other fish and wildlife resources and recreational, cultural and historical values that apply to rivers in the region; and a compilation of Indian religious, cultural or historical resources that must be protected from development.

The Council is conducting the anadromous fish and Indian values portions of the study, while the Bonneville Power Administration coordinates the four states in the remaining study--the Pacific Northwest Rivers Study, addressing resident fish, wildlife and other river values. The studies encompass every year-round stream reach in the region. It is the most comprehensive study of its kind.

The data collected in the studies is being entered into a computer file that can identify and locate the stream reaches as well as the presence or absence of fish, wildlife, or other factors that should be considered before dams are developed on each reach.

With these distinctions and the added recreational, historical, tribal and other considerations available through the file, the Council will designate areas within the Columbia River Basin to be protected from future hydroelectric development, and rank potential hydroelectric sites based on their fish and wildlife values. The Council will then be better able to estimate exactly how much future hydroelectric development the Northwest can count on to meet its electrical needs over the next 20 or more years, without unduly harming fish and wildlife.

Wildlife

While salmon and steelhead have received top priority in the Columbia River Basin Fish and Wildlife Program, the "wildlife" portion of the program also has been active. Not only aquatic habitat was lost or damaged by the dams. Some wildlife species that relied on riverbanks and other surrounding land were also lost, and these losses are as difficult to quantify as fish losses have been.

The program established a step-by-step process for assessing wildlife losses in the basin. The steps in this process are:

1. Develop mitigation status reviews at all Columbia Basin hydroelectric projects.
2. Conduct loss statements where warranted.
3. Conduct mitigation planning if justified.
4. Implement protection, mitigation and enhancement plans upon approval by the Council. If, during this process, agreements as to the extent of restoration work are reached among all responsible parties, status reviews and loss statements need not be conducted.

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[1] 1./ This study was called for in the Council's 1983 Power Plan.

Mitigation status reviews have been completed for federal hydroelectric projects in Oregon, Washington and Montana. In Idaho, however, there are a number of non-federal projects for which reviews have not been completed, because Bonneville has discontinued its practice of funding reviews at non-federal projects.

Loss studies have been completed on the Montana projects and on Willamette River projects in Oregon. Loss studies have also been conducted on Palisades, Anderson Ranch, Black Canyon and Boise Diversion projects in Idaho. Mitigation planning has been completed on the Montana projects and soon will be completed for the Grand Coulee Project in Washington.

The Montana Department of Fish, Wildlife & Parks has submitted proposals for mitigation for damages caused by development and operation of the Hungry Horse and Libby dams. The Hungry Horse proposal would provide for habitat enhancement and protection projects to help such animals as elk, mule deer, grizzly and black bears, waterfowl, bald eagles, and small fur-bearing mammals. The Libby proposal outlines protection and enhancement for white-tailed deer, bighorn sheep, mule deer, Columbian sharp-tailed grouse and waterfowl. Both proposals are being considered in the fish and wildlife program amendment process.

Resident Fish

The first hatchery to be completed under the Council's program--a resident fish hatchery--officially opened in July in Idaho. (The hatchery received its first supply of fertilized eggs in November 1985.) The Cabinet Gorge Kokanee Hatchery is a joint venture of the Bonneville Power Administration, the Washington Water Power Company and the Idaho Department of Fish and Game. It is designed to help reverse declining kokanee (landlocked sockeye salmon) populations in Lake Pend Oreille in Idaho. When operating at full capacity, the hatchery is projected to release as many as 20 million kokanee fry each year.

The Council also approved a resident fish hatchery to be built on the Colville Indian Reservation in northeastern Washington. The hatchery is intended as compensation for salmon and steelhead losses from the construction of Grand Coulee and Chief Joseph dams, which permanently blocked fish runs out of the upper Columbia Basin.

In addition, the Montana Department of Fish, Wildlife & Parks has worked with operators of the nine hydropower dams in northwestern Montana to determine the effects of reservoir fluctuations on resident fish in the vicinity of those dams. Hungry Horse Dam on the South Fork of the Flathead River is already being operated to protect the nests of spawning kokanee salmon. The operators of the Noxon Rapids Dam on the Clark Fork River have recently begun to manage that dam with respect to resident fish protection.

DEVELOPING THE PROGRAM FRAMEWORK: SECTION 201 STUDY

Compiling Information on Salmon and Steelhead Losses

Since February 1985, the Council has been attempting to answer a series of difficult questions. First among these is the issue surrounding the declines in salmon and steelhead runs since the advent of development in the Columbia River Basin. A draft report detailing historic records of salmon and steelhead runs before and during the basin's development, as well as giving an estimate of current run size, was released for public comment in September 1985.

The report assembles 120 years worth of records of sport and commercial catches, cannery output and dam counts. It describes Indian uses of the fish resource before 1850, based on archaeological studies and the accounts of explorers, traders and Indians who lived in those times.

The document also provides year-by-year measures of non-fishing activities that have affected the abundance of salmon and steelhead. These records include hydropower development and operation; logging and mining production; irrigated agriculture and related water diversions; and human population growth.

Other sections describe activities that have helped restore fish populations, including hatchery releases, protective laws, efforts to clean up the environment and programs to increase the numbers of juvenile and adult fish surviving dam passage.

From this data, the staff report estimates that before development in the 1850s the basin was home to between 10 and 16 million salmon and steelhead. The current run size, based on adult fish counts taken at dams, spawning nest surveys and harvest records, is considered to be about 2.5 million. Consequently, for purposes of the fish and wildlife program, salmon and steelhead losses from all causes since development are estimated to be between 7 and 14 million.

At one time, the report adds, salmon and steelhead inhabited the entire Columbia River Basin up to the Arrow Lakes in Canada and below Shoshone Falls on the Snake River. Since about 1850, the estimated salmon and steelhead habitat in the entire basin has declined from about 13,000 miles of stream to only 9,000 miles--a 31 percent loss.

The report indicates that fish runs and habitat in the upper Columbia and upper Snake River areas were the most damaged by development. Much of the habitat in these areas has been permanently blocked or inundated by the federally-operated Chief Joseph and Grand Coulee dams in the mid-Columbia River area and development in the Snake River Basin, such as the privately-owned Hells Canyon Complex.

Hydropower's Responsibility

Having defined the range of total salmon and steelhead losses from all causes, the Council staff then estimated how many of the lost fish should be considered the responsibility of the hydropower system. Without such an estimate, there is no way to define the scope of the program or to tell when the ratepayers have fulfilled their responsibility. Because of the scale and amount of hydroelectric development in the Columbia River Basin, hydropower's contribution to overall losses is a significant portion of the whole.

Today, there are 58 dams in the Columbia River Basin constructed exclusively for hydropower operations, with the largest concentration in the mainstem of the Snake River. In addition, there are 78 multipurpose projects in the basin that include hydropower production among their uses.

In a Council staff issue paper, the range of the hydropower-related losses was estimated to be between 5 and 11 million adult salmon and steelhead annually. Public comment on the paper generally concurred with this range. Currently, the basin produces only about 2.5 million salmon and steelhead. The 5 to 11 million range represents the upper limits of the hydropower system's responsibility for the loss of salmon and steelhead, but those numbers may never be reached because of biological, socio-economic or other limits to production.

The Council's estimate does not assign responsibility for losses to specific projects or areas of the basin. Nor does it describe how, how fast, or how many fish can be restored. These questions are being considered in the production planning process described below. The Council's preliminary move provides language for the draft amendment document, which was released for public comment in early September. Final action on the amendments will be taken in February 1987 (see below).

The Council also set preliminary criteria for substituting fish that do not migrate to the ocean (resident fish) in those areas that lost anadromous (ocean-migrating) fish because of hydropower blockages. Resident fish substitutions are considered to be the only practical means of making up for these permanent losses.

Production Planning

Step three in this framework-building process involves identifying the most effective ways to replace the lost fish and protect the ratepayer investment in the restoration. Several Council activities over the past year have contributed to this planning process.

Planning workshops: From December 1985 through April 1986, representatives from the basin's fish and wildlife agencies, Indian tribes and power interests met in workshops in Portland to develop a process, including computer modeling procedures, that will be used to set production objectives for the basin. Workshop participants had access to a fisheries geneticist and an ecosystem modeler to assist in the planning process.

These workshops emphasized the Council's adaptive management approach to restoration. Adaptive management assumes that, given a broad spectrum of possible activities to protect and enhance the fisheries and limited scientific evidence favoring certain approaches over others, all actions to improve the resource must inevitably be considered experiments. These actions should consequently be designed as a series of responsive steps that provide data to help inform the choices of subsequent actions.

Systemwide planning model: The computer model of the salmon life cycle that was produced in the workshops now can be used to collect and organize large quantities of information. It also can take that information and apply it to simulate reactions to alternative enhancement measures. The model will help the Council explore alternative strategies to improve fish runs. Currently, it is being refined in response to comments and suggestions from fisheries experts and other interested persons in the basin.

The salmon and steelhead data base, that was covered earlier in this report, provides a computerized description of stream reaches in the Columbia River Basin and their existing salmon and steelhead runs and habitat. This information will be used to support the system planning model. It also is compatible with the Bonneville Power Administration's regional rivers data base, which depicts other river values as a part of the Council's Hydropower Assessment Study.

Production planning coordination: In June, a staff issue paper was prepared to generate discussion regarding a process for salmon and steelhead production planning. Because of the three-pronged approach to salmon and steelhead restoration in the basin (passage improvement, fish production and harvest management); the number and variety of groups who carry out these actions; and the potential for these actions to be taken independently of each other, the paper argued the importance of coordination on a Columbia River Basin systemwide basis (consistent with the congressional mandate in the Northwest Power Act). The staff paper recommends using the system planning computer model to help evaluate a wide range of alternative policies for coordinating passage, production and harvest. A follow-up issue paper will then be developed, based on this modeling activity and other information, to initiate basinwide discussion of alternative system policies relating to passage, production and harvest.

With the production planning paper, two technical reports described the genetic considerations that may affect planning choices and the use of the systemwide planning model. The Council took public comment on the paper through July.

Salmon and steelhead research: Development of research priorities for the salmon and steelhead portion of the Columbia River Basin Fish and Wildlife Program is also under way. The Council is concerned that the existing approach to research in the basin may leave major gaps in the understanding of how the watershed and its salmon and steelhead interact. There also is concern that research findings may not be incorporated into long-term policy and project decisions.

A staff issue paper outlining salmon and steelhead research principles for the program was released in June. The paper provided background on how funding for research is currently allocated in the basin and on some of the institutional problems associated with coordination of research. The paper also proposed general research guidelines. Finally, the paper presented a proposal for focusing research efforts as well as alternatives for resolving some of the institutional conflicts that now restrict better coordination and communication regarding research and research findings. After taking public comment on the paper, the Council approved a preliminary set of salmon and steelhead research guidelines and outlined areas of emphasis for immediate project funding for Bonneville and the Corps of Engineers. These preliminary decisions were then incorporated into the draft fish and wildlife program amendment document.

FISH AND WILDLIFE PROGRAM AMENDMENTS FOR 1986/87

The third major thrust of the fish and wildlife program this year has been the amendment process. The amendment process is an opportunity to correct and refine the program in response to new information and new technology. The call for recommendations to amend the program went out in the summer of 1985, and more than 85 suggestions for changes or new emphasis were received from 25 individuals or organizations by February 18, 1986. A summary of the amendment proposals and their complete texts were made available to all interested parties.

After reviewing amendment recommendations at Council meetings and in consultations with fish and wildlife agencies and Indian tribes, the Council staff assembled a draft amendment document. This document, compiling recommendations for amendment adoptions and rejections, was made available for public review in September. Public comment on the draft amendment document will be taken through December 15, 1986. Public hearings will be held in each state in October. The Council expects to take final action on the amendments next February.

Major features of this draft amendment document include these proposals:

- A statement of hydropower responsibility (proposed by the Council last spring).
- A description of the Council's approach to system planning for salmon and steelhead (based on a June 1986 Council staff issue paper on the same subject).
- A call for Bonneville completion of habitat and tributary passage projects by 1989.
- Support for Bonneville funding of a spring chinook hatchery in northeastern Oregon.

- Wildlife plans to mitigate the effects of Libby and Hungry Horse dams in Montana.

- A policy on resident fish substitutions (proposed by the Council last spring) and the proposed addition of a variety of resident fish substitution projects to mitigate the effects of hydropower development in the blocked areas above Chief Joseph and Hells Canyon dams.

- Changes in water budget accounting (the body of water released from the dams to aid downstream juvenile fish migrations) and transportation policy (the practice of moving juvenile salmon and steelhead around the mainstem Columbia dams by truck or barge) and rejection of spill increases (as decided by the Council at its July meeting in Spokane).

- Bonneville's provision of power subsidies for the Umatilla pumping project to aid provision of flows for fish.

- Provision for Bonneville funding of data collection on hatchery and natural salmon and steelhead production.

- Recognition of the Montana Power Company agreement to fund the purchase of water from Painted Rocks Reservoir to maintain flows for fish.

The amendment applications rekindle earlier questions in the basin and raise a few new ones. Fish and wildlife agencies and Indian tribes, for example, are recommending increased spill levels at U.S. Army Corps of Engineers' dams in the mainstem of the Columbia and the lower Snake rivers. The Council earlier extended the spill period to cover summer migrations, but rejected an identical spill increase proposal (as described on page 13). At the request of the fish and wildlife agencies and Indian tribes, the Council is reconsidering that proposal in the current amendment proceedings.

Several other amendment proposals deal with accounting for use of the water budget and related institutional processes through which the water budget is implemented.

New hatcheries for both salmon and steelhead and resident fish, such as bull and cutthroat trout and kokanee, were recommended in several applications. At least six new hatcheries have been proposed for the fish and wildlife program.

The U.S. Forest Service and other agencies have proposed measures to increase natural production of salmon and steelhead in the Columbia River Basin. These measures include clearing obstructions to fish passage on tributaries in the basin where spawning and rearing habitat exists above the blockage, and improving existing habitat to provide better cover, resting areas and streambank stabilization for young salmon and steelhead. In addition to these proposals, seven more packages of fish passage improvements have been recommended for the Yakima River Basin, where work is currently under way to open passage to the habitat that remains intact above irrigation dams (see page 14).

Applicants also proposed that ratepayers fund fish and wildlife agencies and Indian tribes to carry out planning efforts on subbasin fish production, and that Bonneville be directed to develop enforceable conditions for fish and wildlife protection that would apply to developers of generating resources attempting to gain access to the Northwest/Southwest Intertie. The in tertie is the powerline on which electricity is transported from the Northwest to California markets.

The Montana Department of Fish, Wildlife & Parks also proposed amendments to counter the effects of operations at Hungry Horse and Libby dams on wildlife species in western Montana.

In addition, the Council staff proposed revisions of the program's five-year action plan. The action plan schedules program measures to be implemented between 1987 and the end of 1991. The proposed amendment prioritizes fish and wildlife actions to be taken by the Bonneville Power Administration, the Bureau of Reclamation, the Corps of Engineers and the Federal Energy Regulatory Commission.

The Council also is proposing to incorporate findings from the Section 201 study to provide a framework for the salmon and steelhead restoration in the basin, which was described above, into the fish and wildlife program. Products from this study will include a Council statement of salmon and steelhead losses in the Columbia River Basin; an estimate of the hydropower-related portion of those losses; a set of salmon and steelhead research objectives; and a description of future planning needs.

The Northwest Power Act specifies the standards for fish and wildlife program measures. To be adopted by the Council, a proposal for amendment must:

- Protect, mitigate and enhance fish and wildlife affected by development, operation and management of Columbia Basin hydropower facilities, while assuring the region an adequate, efficient, economical and reliable power supply.
- Complement existing and future activities of fish and wildlife agencies and tribes.
- Be based on, and supported by, the best available scientific knowledge.
- Use the alternative with the minimum economic cost where equally effective means of achieving the same sound biological objective exist.
- Be consistent with legal rights of the Indian tribes.
- With respect to anadromous fish, provide for improved survival at Columbia Basin hydropower facilities and provide flows of sufficient quality and quantity between facilities to improve production, migration, and survival as necessary to meet sound biological objectives.

MAJOR 1986 POWER PLANNING ACTIVITIES

THE 1986 NORTHWEST POWER PLAN

The first months of the fiscal year were dominated by work to complete the Council's new Northwest Power Plan, adopted on January 23. 1986 While the Northwest Power Act requires the Council to update its plan within five years, the Council chose to begin the update in 1985, only two years after adopting the first plan, because of major new uncertainties in the region's electrical power picture These included:

1. The future of two unfinished Washington Public Power Supply System nuclear projects;
2. The future of the region's aluminum industry, which buys nearly a third of the Bonneville Power Administration's power;
3. The extent of regional penetration of model conservation standards for new energy efficient buildings; and

4. The extent of out-of-region surplus power sales and purchases.

Guiding Theme: Regional Cooperation

As work began on the new power plan, it was evident the regional surplus of electricity was likely to be both more extended and more expensive than had been anticipated in 1983, when the first plan was developed. It also became apparent that the surplus was not evenly shared, with the bulk of the surplus belonging to Bonneville, whose firm power customers are primarily publicly-owned utilities and direct service industries. On the other hand, most of the fastest growing parts of the Northwest--suburban Seattle and Portland--are served by investor-owned utilities.

The course the region had been taking, prior to the Council's plan, was essentially in the direction of a Northwest divided into the "haves" and "have nots." The ultimate effect of pursuing that course would have been a region where conservation opportunities remained undeveloped in parts of the Northwest, while other parts were building expensive new resources. To avoid this, the Council's new plan calls for unprecedented cooperation among utilities. Specifically, the Council has identified a $2.2 billion savings that will accrue to the Northwest over the 20-year planning period if the region develops resources cooperatively.

This cooperation will entail transferring conservation savings from utilities with surplus power to those with growing power needs ($1.3 billion value). It will also include a regional effort to preserve two unfinished nuclear projects as potential options that could be used if demand for power grows at a rapid rate (average $630 million value) as well as strategies for better use of the existing hydropower system ($280 million value).

Priorities of the Action Plan

The 1986 Power Plan contains an action plan that sets near-term steps to be taken if the region is to achieve the long-term objectives of the overall power plan. Most of the action plan is directed toward the Bonneville Power Administration, but there are also actions for the Council and recommended actions for the region's public utility commissions and investor-owned utilities. The 1986 action plan sets broad objectives, giving Bonneville greater flexibility in how it meets those objectives than the agency had in the 1983 action plan. Bonneville is currently developing work plans to achieve the action plan objectives. The first of these work plans are expected to be released for public comment in October. Final Bonneville work plans are expected in December.

Priority actions in the Council's action plan include the following:

Acquiring "lost opportunity" resources: Because of the surplus, the plan calls for no major near-term resource acquisitions except those cost-effective resources which, if not developed now, will be lost forever to the region. The most prominent examples are model conservation standards for new buildings. If these buildings are not constructed to be energy efficient now, they will consume electricity inefficiently long after the surplus is over.

Promoting a stronger regional role for Bonneville: The Council is calling on Bonneville to take a more aggressive role in forging regional cooperation. The Council particularly believes it is important for Bonneville to develop a predictable rate for new resources, so investor-owned utilities will have sound information to decide if they will turn to Bonneville to meet new power needs. Without such a rate, some utilities may elect to develop resources on their own even when these resources are more costly than purchases from Bonneville.

Developing conservation on a regional basis: As stated above, the sharing of costs and benefits of conservation among utilities would have the greatest dollar value to the region of any single action. The Council is calling on Bonneville to develop mechanisms for the transfer of conservation savings from surplus utility areas to those utilities that need new resources. The Council and the Public Generating Pool (PGP) a consortium of public utilities, are also working cooperatively on a concept whereby conservation savings could be transferred. Further efforts will be made by the Council, PGP and Bonneville to better understand the nature and reliability of conservation savings as well as costs and their allocation, financing and availability of regional resources.

Developing strategies to make better use of the hydropower system: Energy planners base their estimate of the firm power available from the hydropower system on an historic low water period (critical water). But an average water year produces a third more power, and good water years can nearly double the hydropower available. This additional hydropower is called nonfirm power because it may vary depending on how much rain and snow falls in a given year and when it runs down the region's rivers. Currently it is sold, but the income is less than it will cost to build new thermal plants when the Northwest needs more power. The plan calls for strategies to "firm" or back up this power in a cost-effective manner, so that it can be used to meet firm loads if needed.

Building conservation capability in all sectors: While there is a current surplus of power, the Council wants conservation programs to be developed and tested so they can come on line when they are needed. Most capability building in the Northwest has been in the residential sector; the Council calls for development in the commercial, industrial, governmental and agricultural sectors as well.

Demonstrating the cost effectiveness of renewable resources: The plan calls for research and development of wind, geothermal and solar power in the event these resources can be available before the region has to build new thermal generating resources.

Allocating costs of two unfinished nuclear projects and removing barriers to their preservation and completion: These projects are not in the plan's resource portfolio, because the uncertainties surrounding them make them currently unreliable as resources. The Council believes these projects have value (an expected average value of $630 million) as insurance against future power deficits. They would be less expensive to complete than building other new generating resources from scratch. However, most of the cost of preserving the plants is borne by public utilities, which are less likely to need the projects' power than the investor-owned utilities. The Council stated that the projects should be preserved as potential options for the region and that Bonneville should work out an appropriate allocation of the preservation costs.

Studying electrical power sales and purchases between regions: The Council is in the process of developing a Western Energy Study to bring together utility representatives from California, Arizona, Colorado, Nevada, New Mexico, Utah, Wyoming, British Columbia and Alberta, as well as the Pacific Northwest states. The goal of the study is to explore and identify the costs and benefits of coordinating and sharing the West's electrical power resources.

The Regional Forecast

At the low end of the new plan's demand forecast range, the region would continue with a power surplus over the next 20 years, and conservation could meet all the region's new electrical energy needs. The annual growth rate would be 0.2 percent. (This compares with 0.7 percent in the low forecast of the 1983 plan.) At the high end of the range, the region would consume the surplus by 1990, when it would need new resources. The annual growth rate at this end of the forecast is projected at 2.7 percent. (It was 2.5 percent in the high forecast of the 1983 plan.)

With extreme high growth, the region could need as many as 12 new coal plants at the end of the 20-year planning period. Where the region falls between these two extremes will depend largely on its economic growth. The range represents an 11,000 average megawatt spread between the two extremes.

The Resource Portfolio

The resource portfolio sets down the types and amounts of resources and the schedules for bringing them on line to meet growth in demand for electricity. Resources are brought on line in order of the least costly first. Megawatt figures following each resource indicate the total amount of that resource the Council has identified as available and reliable in the highest power demand forecast. Lesser amounts of the resource would be used for lower growth in demand.

Conservation - 3,900 average megawatts: This is down approximately 1,000 megawatts from the amount in the 1983 plan. This is because the highest load forecast is lower in the new plan. Less conservation is available with lower growth because fewer new buildings are constructed. The model conservation standards for new buildings, if adopted regionwide, would take care of all the region's new electrical power needs if growth falls along the low end of the forecast range.

Hydropower efficiency improvements - 112 average megawatts: Opportunities for improving the overall generating efficiency of the hydropower system are the result of improved designs, materials and equipment that have become available since the system was constructed.

Better use of the existing hydropower system - 700 average megawatts: The Council identified a portion of nonfirm power (700 megawatts) that could be cost effectively backed up with other power sources to meet the Northwest's firm power needs. Because the surplus provides time to plan, the Council is calling on the region to explore strategies to expand the use of the Northwest's existing hydropower system, which produces electricity at a fraction of the cost of electricity generated at new thermal plants. While the Council is not recommending a particular strategy at this time, possibilities include using combustion turbines, short-term power purchases from Canada or other parts of the United States, or load-management policies to more closely match the region's power loads with the output of the hydropower system. The Council used combustion turbines to estimate the cost effectiveness of this resource. The Council assumed that nonfirm power would be available 80 percent of the time and combustion turbines--or a lower-cost alternative--would be needed 20 percent of the time to firm up the 700 average megawatts.

Small hydropower - 200 average megawatts: The 1986 figure is down from the 920 average megawatts estimated in the 1983 plan. The Council has included only new hydropower available through improvements and upgrades at existing hydropower sites. No new sites will be included until the Council completes a detailed hydropower assessment study to designate areas that should be protected from hydropower development and to rank sites for future hydropower development.

Cogeneration - 320 average megawatts: Cogeneration is the simultaneous production of electricity and other useful heat energy from a fuel source. Often, it involves the recovery of "waste" energy from various industrial and commercial applications. This energy is typically used for industrial processes or space-heating applications. There is considerable uncertainty over the amount and cost of the cogeneration potential in the region. The Council based its estimate on a survey of Northwest industrial companies conducted by the Pacific Northwest Utilities Conference Committee.

Coal - 5,425 average megawatts (12 plants): This is the last and most expensive resource to come on line and would be used only if medium-high to high growth made it necessary. (Using all 12 plants would require unprecedented high growth.)

MODEL CONSERVATION STANDARDS

In a rulemaking action separate from the power plan, the Council amended the section of its 1983 Power Plan dealing with model conservation standards. The amendment was adopted December 4, 1985; subsequently, it was incorporated into the 1986 Northwest Power Plan.

The model conservation standards set energy efficiency levels for new electrically heated homes and all new commercial buildings in the Northwest. Their purpose is to reduce the need to build expensive new thermal plants in the future as demand for electricity increases. The Northwest Power Act directed the Council to develop these standards, which the Council did in its 1983 Power Plan.

The 1985 amendment deals with how and when the standards will be implemented and how the costs of implementation will be shared. The standards themselves did not change; they call for the same levels of energy efficiency adopted in the 1983 Power Plan. While building codes are still the ultimate objective, the Council has introduced greater flexibility in how the standards may be achieved and how soon. Previously, utilities could have been subject to a 10 percent surcharge on power they purchased from Bonneville if the standards were not in place in their service territories by January 1986.

In areas where building codes do not meet the standards, the amendments call for Bonneville and the region's utilities to offer a program that will provide an incentive for builders to construct new electrically heated homes to the standards. This program, called the BPA/ Utility MCS Program, will offer both marketing and financial assistance. Utilities may offer an alternative program so long as it is judged by Bonneville to produce equivalent savings and, in fact, does so.

The plan calls for Bonneville to pay $2,500 per average-sized new home built during 1987-88 to its full-requirement utility customers. To those utilities that do not purchase all of their power from Bonneville, the agency will pay for the value of the utility's energy savings to the Bonneville system. Local utility payments vary from state to state depending on climate zone and local building practice. Together with the Bonneville payment, these payments represent the average amounts it will take to bring a house from current building practice to the level of energy efficiency required by the model conservation standards. The payments are expected to drop as builders gain more experience with energy efficient homes. While ratepayers ultimately fund the utility payments, this is still significantly cheaper than paying for new thermal plants.

Utilities must choose to participate in the BPA/ Utility MCS Program or submit their own equivalent program. The programs are to go into effect for 1987 and must produce at least 30 percent of the savings possible through the model conservation standards in that year. The Council will set a new target for 1988 this fall. Compliance will be checked annually until at least 85 percent of the new electrically heated homes in the utility area are built to the standards.

The program for early adopters (jurisdictions that have adopted codes meeting the standards) continues, including financial assistance to state and local governments for code enforcement. Since the model conservation standards were amended, three more Washington municipalities--Milton, Fircrest and Cheney--have become early adopters, bringing the total number to nine. Training for builders, insulation contractors and lenders is also continuing. In addition, the standards require that indoor air quality be maintained at a level at least as good as that in homes built to current codes or practice. The Council's plan also calls for continuing research on indoor air quality and on less expensive ways to save electrical energy.

REGIONAL OVERSIGHT OF BONNEVILLE RESOURCE ACQUISITIONS

In January 1986, the Council expressed concern that Bonneville's resource acquisition procedure might not be meeting the requirements of the Northwest Power Act. The issue arose in the context of Bonneville's Draft Aluminum Smelter Conservation/ Modernization Program, which has the potential to conserve approximately 250 megawatts from the Northwest's aluminum smelters. In the Council's view, this program represents a proposal to acquire a conservation resource that may save an amount of energy equal to that produced by a major generating resource. While the Council has no basic disagreement with the merits of this proposal, the Council is concerned that the review the proposal has received fails to meet the resource acquisition provisions set down in Section 6(c) of the Northwest Power Act.

In the Act, Congress granted Bonneville new authority to acquire conservation and generating resources. That authority was not granted, however, without providing for a regional check and balance system on major acquisitions. The Act stipulates that Bonneville may not acquire a "major resource" (a resource over 50 average megawatts acquired for more than five years) before determining through a public process whether such a resource is consistent with the Council's Northwest Power Plan. Once Bonneville has determined whether it is consistent, the Council is given the discretion to make its own determination regarding consistency.

The Council believes Section 6(c) was designed so that major Bonneville resource acquisitions would be ensured a regional review before substantial ratepayer funds were expended. When the Act was adopted, Congress placed a priority on conservation resources. It is now clear that a substantial amount of cost-effective conservation is available in the region. Obtaining these savings could involve the expenditure of billions of dollars of ratepayer funds over the next 20 years.

With respect to one such conservation resource, the residential weatherization program, Bonneville took the position that Section 6(c) applied only if the implementing entity, the local utility, conserved more than 50 average megawatts under its contract. The Council disagreed with this position and made its interpretation of the applicability of Section 6(c) known. Bonneville originally took a position similar to its position on residential weatherization when it published its Draft Conservation Modernization Program. Bonneville stated that a Section 6(c) review should be undertaken only if any individual smelter's efficiency improvements would result in savings exceeding 50 average megawatts. Since it is unlikely that any individual smelter would demonstrate savings of that magnitude, under Bonneville's interpretation Section 6(c) would not apply to any part of the Conservation Modernization Program.

The practical effect of Bonneville's contract-by-contract approach is that only a single contract for the savings to be gained from a large industrial plant would trigger a 6(c) review. The Council believes this thwarts the intent of Congress as expressed in the Northwest Power Act. The Council does not believe all conservation programs would be reviewed; however, accepting the contract-by-contract interpretation would mean that virtually no conservation program would be subject to the regional review provisions found in Section 6(c).

The Council believes a regional consistency review can be conducted without significantly delaying existing or recently proposed programs, including the model conservation standards, the residential weatherization program and the Aluminum Smelter Conservation/ Modernization Program. The Council supported an expedited review process to minimize delay of the Conservation/Modernization Program and noted that failure to review the program leaves open the possibility that litigation might result in major delays. Bonneville responded that such an expedited review "would jeopardize the Conservation/ Modernization Program by creating the opportunity for argument that BPA had violated the Northwest Power Act's Section 6(c) procedural and policy requirements."

In an effort to resolve the issues surrounding the proper interpretation of Section 6(c), the Council and Bonneville have agreed to work cooperatively toward interpreting their respective responsibilities under Section 6(c). On July 29, the Council and Bonneville submitted to the public for review and comment a joint issue paper describing the issues related to Section 6(c) and presenting alternative approaches to these issues. The paper was intended to generate discussion in three areas: 1) What types of resources trigger a Section 6(c) review; 2) What procedures should each agency pursue to conduct such a review; and 3) What criteria should be used to determine whether a resource is consistent with the Council's power plan. A consultation group, made up of representatives from generating and nongenerating utilities, conservationists and state agencies, was formed to meet with the Council and Bonneville to discuss the issue paper and development of both agencies' interpretations. The group held two meetings, one on July 24 and one on September 2.

The Council accepted oral comment on the joint issue paper at both its August and September meetings. On September 19, the Council and Bonneville issued, under a joint letter, draft interpretations of their respective 6(c) responsibilities. Bonneville scheduled a new comment period to close on October 10. The Council arranged to take comments through October 15, to coincide with its regularly scheduled monthly meeting. Each agency expects to issue a statement of its 6(c) responsibilities at the close of this policy-making exercise. It was not possible to summarize the comment received on the 6(c) issue in this annual report, because comments were still being accepted on the date this report went to the printer. That date could not be changed because the Northwest Power Act requires that this report be delivered to Congress on October 1.

THE COUNCIL'S PLAN AND BONNEVILLE'S RESOURCE STRATEGY

Shortly after the Council's 1986 Power Plan was published, Bonneville sought public comment on its resource strategy. In a letter to the Bonneville Administrator, the Council identified some concerns with Bonneville's 1986 resource strategy. The primary reason for the Council's concern was that the document focused to a great degree on long-term power supply issues. The Council believes that the Northwest Power Act intended for the Council to focus on long-term planning, while Bonneville should focus on near-term implementation decisions such as budgeting and staffing. The Council feels it is appropriate for Bonneville to test the objectives of the Council's plan for fiscal soundness and utility prudency as it makes implementation decisions.

However, much of Bonneville's resource strategy dealt with Bonneville's forecast of 20-year power needs; an assessment of resources to meet those needs; and a new computer model that incorporated a definition of cost effectiveness inconsistent with the one used in the Act and the Council's power plan. The Council also wished to ensure that the relationship between the resource strategy and the power plan was clear to the region's organizations and ratepayers who are called upon to comment on Bonneville's resource strategy. The Council and other organizations that commented on the resource strategy were concerned that the region was going through two competing long-term planning efforts. This duplication was creating confusion and, in the Council's opinion, did not appear to be consistent with the responsibilities assigned by the Act. This interpretation of the Council's planning functions was supported by the decision of the Ninth Circuit Court of Appeals in Seattle Master Builders v. Northwest Power Planning Council.

In a February 14 letter to Bonneville, the Council expressed its belief that it would be a much better use of the talents and energies of the region's power experts to focus first on the Council's public planning process in developing a consensus on the region's long-term plan and objectives.

Bonneville already participates actively in this process and contributes significantly to improving the plan. Bonneville would also conduct an internal review of both the draft and the final plans. Bonneville's resource strategy should then focus the region's expertise on the near-term work plans to carry out the objectives of the plan. Such an arrangement would ensure that the activities of the Council and Bonneville complement each other and provide for full public involvement.

In discussing this issue, Bonneville responded with the following statement: ". . .when implementing the Council's action plan, proposing conservation or other resource acquisitions, standing prepared to meet firm power loads of Northwest utilities in excess of their own resources whenever requested, designing its transmission system, and exercising its utility responsibilities, BPA has an unavoidable duty to consider both near-term and long-term consequences. Although BPA appreciates that the Council deals with long-term planning, its power plan also describes actions that should be taken in the near term if long-term goals are to be achieved."

The Council and Bonneville are continuing to work to improve the linkage between the Northwest Power Plan and the resource strategy.

IMPACT OF OIL AND GAS PRICE CHANGES

The costs of alternate energy resources, such as oil and gas, affect the demand for and price of electricity. These impacts are accounted for in the power planning process. However, since the 1986 Power Plan was adopted, oil prices have dropped to levels comparable to those in 1974. The Council staff has done a preliminary analysis to determine if there will be any significant impact on the power plan or on Bonneville's rates.

It appears too early to determine if oil prices will remain very low, or if they will tend to be cyclic, rising and falling. But, because the power plan is a long-term document, it is not necessarily affected by short-term fluctuations. In fact, it takes such fluctuations, including oil prices, into account in the various forecasts. The plan anticipates a drop in oil prices between 1985 and 1990 in both the low and medium-low forecast scenarios. The drop in the low forecast is to the current low level. In the near term, there is no impact on the power plan, because the plan does not call for any near-term resource acquisition except for those low-cost resources that would otherwise be lost to the region.

Given the uncertainty about present prices and the flexibility built into the plan, the Council staff has recommended no change in the plan at this time. The staff will continue to monitor the situation, and, if it appears oil or gas prices will remain very low over the long term, the Council would review its plan in an open process.

While the plan is not affected in the short term, the Council believes that Bonneville's revenues may be. Approximately one-fourth of Bonneville's sales are out-of-region. Lower oil/gas prices make the Northwest's surplus electricity less competitive with the Southwest's oil-fired generation. The Council staff agrees with Bonneville's efforts to maintain rate flexibility to ensure that it can meet its fixed federal repayment debt in the event of a revenue shortfall, while maintaining programs that are important to the region.

Over time, continued low oil prices would be good for the region's economy, because they would extend the region's electricity surplus and reduce the need to build costly new resources.

MAJOR 1986 CONGRESSIONAL ACTIVITIES

FISH AND WILDLIFE RELATED CONGRESSIONAL ACTIVITIES

The Council staff provides members of congressional staffs with updates on its fish and wildlife activities through quarterly reports. The Council has also reviewed the budgets of several federal agencies involved in implementation of the Columbia River Basin Fish and Wildlife Program. These agencies include the Bureau of Reclamation, the U.S. Army Corps of Engineers, the Federal Energy Regulatory Commission, Bonneville Power Administration, and the National Marine Fisheries Service.

The fiscal year 1987 Bureau of Reclamation budget appears to contain sufficient funds--some $12 million--for continuation of the Yakima River Basin fish passage projects on a schedule that has been developed by relevant federal agencies, the Yakima Indian Nation, state agencies, the Council and other affected parties. The Council encouraged the provision of an additional $150,000 to expedite preparation of an environmental impact statement on the Yakima River Basin Water Enhancement Project--an effort to evaluate storage and water conservation activities that would provide enhanced flows for fish migration. The Council also encouraged the provision of an additional $250,000 to carry out fisheries enhancement studies and design work in the Umatilla River Basin.

The Council continued to emphasize the need to expedite the evaluation and construction of mainstem passage projects in its comments on the fiscal year 1987 U.S. Army Corps of Engineers' budget. In response to Council testimony on the fiscal year 1986 Corps budget, Congress adopted appropriations committee reports language which clearly expressed the need "to ensure that adequate downstream juvenile salmon and steelhead fish passage facilities exist, permitting passage around the Columbia River mainstem dams..." and that "existing fish passage facilities need substantial improvement and... additional funds are required to improve these facilities as rapidly as possible." Congress provided an additional $3 million to accelerate studies of the facilities. The Corps of Engineers was able to use existing fish passage screens and carry over approximately $1 million of the appropriated funds, which can be used in the current fiscal year.

The Council has met with a variety of interested parties and the Corps to identify ways to speed up the mainstem passage improvements schedule. Council testimony to Congress has particularly noted that the design and testing of a new generation of double-length juvenile fish passage screens should be expedited. The Corps initially anticipated conducting these studies in fiscal year 1988, and then, only at a modest level of activity. Under that schedule, the Council felt that the Corps would not have results from the double length screen tests until after screens have been put in place at the mainstem projects. Accordingly, the Council has urged studies to be initiated in fiscal year 1987 and completed at the earliest feasible date.

Given the fact that additional hatchery releases are occurring from Lower Snake Compensation Plan hatcheries in the upriver portions of the river system, the Council endorsed additional funding for expanded juvenile fish holding and barge loading facilities at Little Goose Dam and similar facilities at McNary Dam.

The Council noted that the Federal Energy Regulatory Commission (FERC) budget does not clearly indicate the level of funding for clustering studies of cumulative hydroelectric facility impacts. The Council supports continuation of the experimental clustering concept on the Salmon River in Idaho, although it disagrees with some aspects of the FERC approach. If the clustering approach proves suitable, a number of other rivers in the basin could be candidates for similar studies in the future.

The Council indicated that the Bonneville fish and wildlife budget appears to contain sufficient funds for implementation of fish and wildlife projects in the Columbia River Basin Fish and Wildlife Program. However, the Council also noted that there is increasing concern about delays in contracting, procurement and coordination with the fish agencies, tribes, the Council and other affected parties. On June 20, Bonneville announced plans to cut its fish and wildlife program budgets. The Council is currently reviewing the possible budget changes and their effect on the fish and wildlife program implementation.

The Council repeated its opposition to transferring the Mitchell Act hatchery funding to the Bonneville Power Administration. The Council noted that the region's ratepayers and state agencies are providing significant levels of funding for Columbia River Basin fish and wildlife restoration. In addition, the Council pointed to provisions in the Northwest Power Act which indicate a congressional expectation that existing funding would be continued.

The Council also noted that the cuts proposed for the National Marine Fisheries Service (NMFS) budget were substantial, and that many of the NMFS activities in the Northwest are beneficial to the effort to restore Columbia River salmon and steelhead.

The Council submitted comments on the hydroelectric relicensing legislation currently pending in Congress. The Council did not take a position in the dispute concerning public utility preference in relicensing proceedings. Rather, the Council urged that the relicensing legislation be drafted so as to explicitly avoid modifying any of the substantive or procedural obligations that operating agencies have under the Northwest Power Act. The Council noted that there was no regional sentiment for amending the Northwest Power Act at this time.

Both the House of Representatives and the Senate energy committees adopted bill language clarifying congressional intent not to alter, supersede or interpret the provisions of the Northwest Power Act. The legislation was being evaluated in conference committee at the time this report went to press.

POWER RELATED CONGRESSIONAL ACTIVITIES

Throughout the year, the Council has provided congressional offices with background on Northwest power issues. Assistance has ranged from telephone responses to specific questions, to more general publications including issue papers, background material and power plan drafts. These activities helped congressional offices keep informed about the Council's 1986 Power Plan.

In April, as in previous years, the Council presented testimony on the Bonneville Power Administration s fiscal year 1987 budget to the House and Senate Appropriations Subcommittees on Energy and Water Development. The testimony noted that the President's budget recommendation to Congress proposed a $21.7 million cut in the energy conservation budget. While that cut is substantially smaller than the $70 million cut proposed in the previous fiscal year, the Council concluded that its effects could be severe.

If the residential weatherization and model conservation standards programs are held at the currently proposed levels, the result will be a 33 percent cut in the conservation capability building activities in the commercial, industrial and governmental sectors. These capability building efforts are designed to ensure that the region will be able to acquire cost-effective conservation in all sectors of the economy when needed in the future. Accordingly, the Council urged that the $21.7 million cut be restored.

In congressional deliberations on the fiscal year 1986 Bonneville budget, the House and Senate Appropriations Committees restored some $70 million in proposed conservation borrowing authority cuts. However, in recently re-estimated fiscal year 1986 funding levels, the Administration has suggested a level some $40 million below the congressionally approved level. The Council has asked Congress to review the evolution of the fiscal year 1986 energy conservation budget to determine how much of the reduced expenditure level is caused by schedule changes and pre-payment of conservation activities, and how much is the result of Administration-required cuts after congressional action.

Since the House took action on Bonneville's fiscal year 1987 budget, Bonneville has concluded that cuts in its power expenditures and borrowing authority are necessary for fiscal year 1987 and subsequent years. The Council is consulting with Bonneville on these proposed changes.

MAJOR 1986 PUBLIC INFORMATION AND INVOLVEMENT ACTIVITIES

Public information and involvement are legal obligations of the Council, as mandated by the Northwest Power Act. The Council interprets this as an "affirmative action" mandate; that is, the Council does not wait for people to come to it, but actively seeks to involve them in its process.

Continuing Activities

Council programs are built around the need to involve the region in its work. The Council meets in public at least once a month throughout the Northwest states. These meetings are announced in advance in the Federal Register and two Council newsletters, and are promoted by an agenda sent to over 11,000 people and organizations. All Council decisions are made in these meetings, with public comment opportunities provided. A quorum of the Council may not meet unless the meeting has been announced in advance. (Formally announced closed meetings can be held to discuss internal personnel matters or legal proceedings. A list of closed meetings is contained in the legal division section under "Government in the Sunshine Act.")

The public involvement division is the Council's information center. Most information request calls are routed to this division. Those questions that the division's staff cannot answer are forwarded to the appropriate technical staff. Toll-free telephone lines (1-800-222-3355 for Idaho, Montana, and Washington and 1-800-452-2324 in Oregon) are available to encourage public access to the Council.

The distribution of all Council publications, such as issue papers, brochures and work plans, is centralized in the division, providing the public with a simple one-call system to obtain these publications.

The Council publishes two perennial publications to keep the region informed about the Council's work. Northwest Energy News, a bimonthly magazine, provides in-depth background information to 15,000 people. It focuses on regional energy and fish and wildlife news and major Council issues and activities. For the second year in a row, Northwest Energy News has received an award for the best overall publication in regional business communications competitions.

The newsletter Update! lists reports and papers available from the Council, public involvement opportunities and deadlines and upcoming meetings. It accompanies a synopsis of the previous Council meeting and an agenda of the coming meeting. About 11,000 people receive Update! monthly.

Issue papers are developed and distributed on major issues before the Council. Because these papers are frequently very technical, one-sheet layperson's summaries are developed to provide background on these issues. These summaries are available to the press and members of the audience. Council meetings are also made more meaningful by the use of graphics in all staff presentations. Overhead projected graphics are used extensively to highlight presentations. Copies are also distributed to help the audience understand the proceedings.

The division maintains a reading room/library which is open to the public during office hours. It contains the administrative records for both the energy plan and the fish and wildlife program as well as a number of publications relating to energy and fish and wildlife matters.

Two films and several slide shows are distributed free of charge throughout the region to explain the Council's activities.

Fish and Wildlife Public Involvement

Concurrent with the publication of the 1985 Draft Power Plan, the Council began the amendment process for its Columbia River Basin Fish and Wildlife Program. Between July 9, 1985, and February 18, 1986, the Council asked interested parties to submit applications containing proposed amendments. These applications were bound into a five-volume set and distributed to approximately 200 interested people and organizations. A summary of the amendments received wider distribution.

In early September, following the Council's approval, a draft amendment document with preliminary proposals for accepting or rejecting the applications was distributed. The public comment period, with consultations and hearings in each state, will last until December 15, 1986.

To enable people to follow this process, Northwest Energy News and Update! carry frequent articles and notices about the fish and wildlife program. Northwest Energy News also regularly carried a "Goals Process Update" this year to help people stay informed on another major project of the fish and wildlife division--the study to develop a framework for the salmon and steelhead portion of the fish and wildlife program.

Four advisory committees (formed in 1985) address mainstem passage, production planning, losses and goals, and resident fish substitutions. In 1986 these committees advised the Council and its staff on this framework study and other ongoing concerns. The Salmon and Steelhead Losses and Goals Advisory Committee has completed its mission and has been disbanded.

Seven issue and discussion papers dealing with various aspects of the study and other fish and wildlife issues were distributed for public comment. In addition, approximately 500 copies of the staff report, *Compilation of Information on Salmon and Steelhead Losses in the Columbia River Basin* were distributed. A media release on the losses study was also mailed to the region's media.

Representatives from the region's fish and wildlife agencies, Indian tribes and power interests participated in several workshops held by the Council on salmon and steelhead production and computer modeling. (See section on "Major 1986 Fish and Wildlife Activities.") A coordinating committee was formed to assist in the fish production planning studies, and a technical work group assisted with developing the computer model.

The hydropower assessment steering committee continues to advise the Council on the impact on fish and wildlife of the Northwest's existing and potential hydropower sites.

In May, several Council members toured the ongoing Yakima Basin Enhancement Project; held a media briefing; and met with representatives of the basin's irrigation districts, agricultural associations and the Yakima Indian Nation.

1986 Power Plan Public Involvement

Starting as far back as the summer of 1984, advisory committees and task forces were formed to examine and advise the Council on specific issues related to drafting the 1986 Power Plan. Committee members were chosen to represent a wide range of interests and expertise. Approximately 140 people participated in these committees. Subjects covered included conservation in all sectors, economic and demand forecasting, and resource optioning. These committees, along with committees focusing on fish and wildlife issues, make up the Scientific and Statistical Advisory Committee called for in the Northwest Power Act.

Throughout development of the 1986 Power Plan, the Council held consultations with the utility and industrial customers of Bonneville, consumer and environmental groups, state and local governments and the Bonneville Power Administration. These consultations have involved both regionwide sessions as well as state-level meetings in each of the four Northwest states. Consultations have included Council meetings with regional policy-makers and other members of the public, as well as staff-to-staff meetings between the Council and other organizations.

Because support at the state level is crucial for implementation of the plan, the views of the state energy and regulatory agencies were carefully considered in the plan's development. To ensure this involvement and to improve ongoing communication, the Council established a State Agency Advisory Committee made up of members of the Northwest states' public utility commissions.

Both *Update!* and *Northwest Energy News* announced the availability of over 20 discussion papers describing various issues relating to the 1986 Power Plan. These issue papers were circulated widely in the region and to interested parties in other states (a total of over 4,000 people). Comments were solicited and used by the Council in making preliminary decisions on the issues. All comments were entered in the administrative record and distributed to the appropriate staff and Council members. Those people who sent in written comment received verification that their comment was being entered in the record.

The Council's preliminary decisions were incorporated in the draft plan, which was adopted in August and distributed for further public comment. The comment period closed on October 25, following hearings in each state. Comments from over 150 groups and individuals were received.

Early in 1985, an advertisement was run in 12 regional newspapers and magazines announcing the 1985-1986 power planning process and opportunities for involvement in it. Both *Update!* and the draft plan mailing lists were expanded with 325 responses to these ads. Two other advertisements were run in the summer to publicize the availability of the draft plan and to announce the public hearings. The latter was a full-page advertisement.

The final plan was adopted in January 1986. The Council distributed over 3,700 copies of the final 1986 Power Plan to interested parties.

Because the Council was concerned that an adequate cross section of the region might not be represented before the Council, a special effort was made to promote the participation of under-represented groups in this process. The Council used a contractor to build a list of under-represented groups and to set up meetings between these groups and Council members and/or staff.

To assure accurate media coverage of the Council's activities, key media people were regularly briefed on the power plan process, and a media kit was distributed at each Council meeting. A media release announcing the draft and final plan was also sent out.

Model Conservation Standards Amendment Public Involvement

At the same time that the 1986 Power Plan was being developed, the Council considered an amendment to the model conservation standards contained in the 1983 Power Plan. This amendment was adopted at the Council's December 4, 1985, meeting and was incorporated into the 1986 plan.

In March 1985, an issue paper reviewing the model conservation standards was released for public comment. Subsequently, two addenda to that paper were also released. Over 600 copies of the issue paper and addenda were distributed. On July 10, 1985, the Council voted to consider amending the standards and initiated a public comment period that ended on September 25, 1985. Hearings were held in each state with over 20 groups testifying. Announcements describing the proposed amendment were sent to more than 300 people and organizations. In addition, announcements were published in the Council's magazine, *Northwest Energy News*, and newsletter, *Update!*. Media releases, which covered the amendment proceedings extensively, were sent to the Northwest's media.

Based on the responses received, the Council decided to revise the amendment and reopen the comment period. Testimony was again taken on the standards at the power plan hearings in October 1985. In all, 150 groups and individuals commented on the proposed amendments.

Throughout this entire process, Council members and staff met frequently with local governments, utilities, and other interested parties to keep them informed on the Council's decision process and to solicit their input. At the beginning of the process, a special mailing was sent to 1,600 members of the region's homebuilding industry to inform them that the Council was reviewing the model conservation standards and to invite their comment and participation.

The Council has distributed 1,200 copies of the *Notice of the Final Model Conservation Standards Amendment* as published in the *Federal Register*.

Public and Government Liaison

In 1986 the Council continued its efforts to work closely with the region's local governments. This included regular attendance at the energy committee meetings of the region's local government associations; participation in Bonneville's regional state, local and tribal government consultation group, and participation in Bonneville's task force on adoption and enforcement of model energy codes

The focus of the Council's liaison effort has broadened to include state energy agencies, electrical utility associations and conservation groups, with a change of the title from local government liaison to public liaison. The principal emphasis in 1986 has been adoption of the Council's model conservation standards as energy codes or utility service requirements.

This function is performed in close coordination with these identified segments of the public, along with the Council offices in each state.

State Office Coordination

Three of the four state offices have a staff member who either fully or as a part of another job covers public involvement. These people met several times with the central office staff to establish coordinated central and state public involvement plans.

MAJOR 1986 LEGAL ACTIVITIES

LITIGATION

Seattle Master Builders Association, et al. v. Northwest Power Planning Council: On April 10, 1986, the United States Court of Appeals for the Ninth Circuit decided this challenge to the Council's model conservation standards brought by several construction-related organizations. The petitioners had advanced two principal lines of argument. First, with respect to the Council's model conservation standards, petitioners challenged the cost effectiveness of the measures to make new buildings more energy efficient, and the methodologies used by the Council to determine cost effectiveness. Petitioners also argued that the Council should have prepared an environmental impact statement regarding promulgation of the standards.

Second, petitioners challenged the constitutionality of the Council, citing the appointments clause of the U.S. Constitution, which requires officers of the United States to be appointed by the executive branch of government. Council members are officers of an interstate compact agency appointed by the governors of the four Northwest states and not by the President.

The Department of Justice intervened on behalf of the Bonneville Power Administration, arguing that the court need not reach the constitutional question, because the Council's adoption of the standards did not comprise the exercise of significant authority over Bonneville, a federal agency.

Amicus briefs supporting the Council's position were filed by the states of Idaho, Montana, Oregon and Washington; the National Governors Association; the City of Tacoma, Washington; the California Energy Commission; and the Northwest Conservation Act Coalition. The Pacific Legal Foundation filed an amicus brief on behalf of the Master Builders.

In a two-to-one decision, the Ninth Circuit ruled for the Council on all the issues. With respect to the model conservation standards, the court held that the Council had adopted a proper approach to determining the cost effectiveness of conservation measures; that the methodology the Council used for determining conservation value was within the Council's discretion; and that the Council was not obliged to prepare environmental impacts statements on the standards, pursuant to the laws of the states that are members of the interstate compact. On the constitutional question, the court, having noted that the functions of the Council and Bonneville "directly overlap," held that the Council "violates neither the compact nor appointments clauses of the United States Constitution. The Act established an innovative system of cooperative federalism under which the states, within limits provided by the Act, can represent their shared interests in maintenance and development of a power supply in the Pacific Northwest and in related environmental concerns".

The court noted that there is precedent for federal agencies following policies established by states or interstate compact agencies.

The Master Builders petitioned the Ninth Circuit for rehearing en banc (before a larger panel of judges in the circuit) on the ground that the panel overlooked material laws and facts. The United States also petitioned for rehearing or for rehearing en banc, arguing that the court decided constitutional questions not presented by the case. The Ninth Circuit denied both petitions.

Seattle Master Builders Association, et al. v. Northwest Power Planning Council (Master Builders II): In December 1985, the Council adopted amendments to the model conservation standards. After the amended model conservation standards were published, the Master Builders filed a new action, asking the Ninth Circuit to review the Council's amended standards. The petition does not specify the grounds upon which the Master Builders predicate this lawsuit.

Northwest Conservation Act Coalition, et al. v. Northwest Power Planning Council: The Coalition and the Natural Resources Defense Council have filed a petition for review in the Ninth Circuit challenging the amended model conservation standards in an effort to make the requirements of the amended standards more rigorous. In particular, petitioners allege that the Council's standards for conservation in new commercial buildings ought to be more stringent; that a surcharge is necessary if the standards governing the energy efficiency of buildings that convert to electric space heat are to be effective; and that the Council's amended standards ought to contain standards for utility-financed incentives to conserve electricity in existing residences. The petitioners also have filed a petition with the Council urging it to enter rulemaking to amend the model conservation standards in the respects summarized above. Petitioners have agreed that if the Council grants the petition and enters rulemaking (regardless of the final result of the rulemaking), petitioners will ask the Ninth Circuit to dismiss their petition for review.

CASE, et al. v. Northwest Power Planning Council: CASE (an unincorporated group), the Utility Reform Project, and Michael Rose filed a petition for review with the Ninth Circuit, asking the court to modify, set aside and/ or remand certain portions of the amended standards to the Council. Petitioners allege that the Council has failed to adopt standards that will produce all power savings that are cost effective for the region. The petitioners also have filed a petition with the Council urging it to enter rulemaking to amend the model conservation standards in the respects summarized above. These petitioners have also agreed that if the Council grants the petition and enters rulemaking (regardless of the final result of the rulemaking), petitioners will ask the Ninth Circuit to dismiss their petition for review

FERC Proceedings Regarding Rock Island Dam: The states of Oregon and Washington, the National Marine Fisheries Service, and the Yakima and Colville Indian Tribes, in an action filed with the Federal Energy Regulatory Commission (FERC), challenged the adequacy of fishery protections at Rock Island Dam, a hydroelectric project on the Columbia River owned and operated by Chelan County Public Utility District (PUD). Petitioners urged FERC to require Chelan to install mechanical bypass systems and to spill water to protect fish until those systems are installed. The Council intervened in this action to urge FERC to take the Council's Columbia River Basin Fish and Wildlife Program into account to the fullest extent practicable, as required by the Northwest Power Act. The program calls for bypass system development and for spill under certain conditions. In January 1986, following extended hearings and submission of briefs, a FERC administrative law judge issued an opinion that directed Chelan to do modeling studies of bypass systems for the dam, but did not require spill. All parties except the Council sought review by the full Commission. The Council has filed a brief that argues, in the main, that the case was correctly decided by the FERC administrative law judge.

FERC Actions Regarding Enloe Dam: On March 3, 1983, FERC's Director of the Office of Electric Power Regulation issued to Okanogan PUD a license for Enloe Dam on the Similkameen River in Washington. FERC's order gave no indication that FERC had taken the Council's fish and wildlife program into account "to the fullest extent practicable." On April 12, 1983, the Council moved to intervene in the proceeding. On March 6, 1986, FERC issued an order rescinding Okanogan PUD's license and retaining the license application on file "for further processing." In rescinding the license, FERC held that anadromous fish issues such as those raised by the Council's program must be resolved before a license is issued. FERC's director of hydropower licensing had issued the license challenged in this proceeding before resolving anadromous fish issues.

The Commission retained the license application to: (1) receive further information needed to resolve the fish issues; (2) allow the PUD to decide whether it wanted to proceed; and, if so (3) to allow the parties to see whether they could resolve Enloe Dam's fish passage problems. The Council has not objected to the decision.

National Wildlife Federation v. FERC: This case, described in last year's annual report, was fully briefed and argued before the United States Court of Appeals for the Ninth Circuit in May 1985. The Council filed an amicus brief arguing that the Federal Energy Regulatory Commission had failed to explain how its refusal to conduct cumulative review of all Salmon River Basin hydropower projects took the Columbia River Basin Fish and Wildlife Program into account to the fullest extent practicable. The Council also claimed that the Commission had failed to demonstrate equitable treatment of fish and wildlife as required under the Northwest Power Act. The court has not yet announced its opinion.

GOVERNMENT IN THE SUNSHINE ACT

Section 4(a)(4) of the Northwest Power Act provides that the Council is subject, to the extent appropriate, to the federal laws that apply to the Federal Energy Regulatory Commission with respect to open meetings. This report is supplied to Congress in compliance with the open meetings policy of the Council and section 4(g) of the Government in the Sunshine Act. Between October 1, 1985, and September 30, 1986, the Council conducted a total of 18 public meetings. Limited portions of the following meetings were closed to the public in conformity with the requirements of the Government in the Sunshine Act for the reason or reasons stated.

Date of Meeting	Purpose of Meeting
October 30-31, 1985	Discuss civil litigation and personnel matters
January 23, 1986	Discuss personnel matters
April 9-10, 1986	Discuss civil litigation
May 14-15, 1986	Discuss civil litigation
June 11, 1986	Discuss civil litigation
July 10, 1986	Discuss civil litigation
August 7, 1986	Discuss civil litigation
September 18, 1986	Discuss civil litigation

On March 26-27, 1986, the Council held a meeting which was entirely closed to the public to discuss personnel matters.

RULEMAKING

During the past year, the Council completed several major rulemakings and entered into another. For the amendments to the model conservation standards, the 1986 Power Plan, a policy for petitioning for changes to the power plan, and the mainstem passage rulemaking (an amendment to the interim smolt survival objective contained in the Council's Columbia River Basin Fish and Wildlife Program), the legal division prepared the required *Federal Register* notices, attended hearings and consultations, managed the requisite administrative records, and drafted the Responses to Comments that were adopted by the Council. The legal division is providing similar support to the fish and wildlife division in the current amendment process for the fish and wildlife program.

MAJOR ADMINISTRATIVE ACTIVITIES

During fiscal year 1985, the Council devoted its efforts to developing the 1986 Power Plan and monitoring the implementation of both the Columbia River Basin Fish and Wildlife Program and the 1983 Power Plan. During that year, the Council expended $6,184,000. This represented an under-expenditure of $854,000 of the Council's $7,038,000 budget for that year. (The fiscal year 1985 annual audit is reproduced as Appendix H.)

The Council's approved budget for fiscal year 1986 is $6,536,000. Of this, the Council is projecting expenditures of $6,180,000. This will be approximately $356,000 under budget. The largest categories of expenditure in fiscal year 1986 were for the operations of the central and state staffs supporting the Council members.

In July 1986, the Council presented to Bonneville its fiscal year 1988 and revised fiscal year 1987 budgets. Current budget projections assume continuing efforts to monitor the implementation of both the program and the plan and possible amendments to either, as new information from the implementation activities is evaluated. Copies of the Council's budget are available on request.

The budget was made available for public review and comment and will be submitted to Congress by the President early in 1987 as part of Bonneville's budget submittal.

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APPENDIX A

Council Member Biographies

COUNCIL MEMBER BIOGRAPHIES

MORRIS BRUSETT (Montana)
Brusett was director of the Montana Department of Administration from 1981 to 1985. As director, he was also ex officio treasurer for the State of Montana and chairman of the Governor's Capital Finance Advisory Council. He is a certified public accountant, and he served as Montana's legislative auditor from 1967 to 1981. He was responsible for conducting financial and program audits of all state agencies.

ROBERT B. DUNCAN (Oregon)
Duncan served in the U.S. House of Representatives representing Oregon's Fourth and Third Congressional Districts from 1963 to 1967 and from 1974 to 1980. He represented Jackson County in the Oregon Legislature for three terms from 1957 to 1962, and he was speaker of the House during the 1959 and 1961 sessions. Duncan was a member of the Portland law firm of Schwabe, Williamson, Wyatt, Moore and Roberts from 1980 to 1985.

DONALD GODARD (Oregon)
Godard worked for the Oregon Department of Energy as the administrator for the siting and regulation division from 1976 to 1984. He was assistant manager for Teledyne Wah Chang between 1975 and 1976 and worked on the U.S. Navy's Nuclear Propulsion Program from 1971 to 1975.

KAI N. LEE (Washington, vice chairman)
Lee is an associate professor of environmental studies and political science at the University of Washington; he is also an adjunct faculty member at the Institute of Marine Studies. He serves on the Board of Radioactive Waste Management at the National Academy of Science. From 1976 to 1977 he served as a White House Fellow to the Secretary of Defense.

W. LARRY MILLS (Idaho)
Mills worked at Boise Cascade Corporation as director of governmental affairs and director of corporate relations from 1957 to 1977. Mills was an administrative assistant to Congressman Hamer Budge from 1951 through 1954. He was principal of Potlatch Elementary and Junior High School from 1948 through 1952 and worked for Potlatch Forests, Inc., from 1946 through 1948 and from 1941 through 1943. Mills was Idaho state representative for Boise County, 1940-1942; for Latah County 1946, 1948, 1950-52, and for Ada County 1962-1966. From 1951 to 1953 he was speaker of the Idaho State House of Representatives.

GERALD H. MUELLER (Montana)
Mueller has been an administrative assistant and an energy advisor to Montana Governor Ted Schwinden, and to Lieutenant Governor Schwinden between 1978 and 1981. Mueller was program manager, Major Facilities Siting Act in 1978. He was an air analyst for the energy planning division, Montana Department of Natural Resources and Conservation between 1974 and 1977

ROBERT W. SAXVIK (Idaho, chairman)
Saxvik served three terms in the Idaho State Senate where he was assistant senate minority leader in 1975 and 1976. He was legislative liaison with the governor from 1977 to 1978, and director of the Office of Aging in 1978. From 1978 to 1981, he was chief of staff for Idaho Governor John Evans. Saxvik was also vice president and general manager of KBAR radio station in Burley, Idaho.

TOM TRULOVE (Washington)
Trulove has been a professor of economics at Eastern Washington University since 1969 and is currently taking a three year leave of absence. He was mayor of the City of Cheney from 1978 to 1985. Active in the Association of Washington Cities, he served as a member of several of its committees and was president of the Association from 1984 to 1985. During the development of the 1983 Power Plan, he was vice chairman of the Northwest Power Planning Council's forecasting subcommittee.

APPENDIX B

Central Office Staff

CENTRAL OFFICE STAFF DIRECTORY

DIRECTOR'S OFFICE

Edward Sheets, Executive Director
Rick Applegate, Assistant to Executive Director
Bess Atkins, Administrative Assistant

POWER PLANNING DIVISION

Jim Litchfield, Director
Mark Cherniack, Conservation Analyst
Ken Corum, Economist
Tom Eckman, Conservation Analyst
John Fazio, System Reliability Analyst
Tom Foley, Manager, Conservation & Resource Assessment
Margie Gardner, Conservation Analyst
Wally Gibson, Manager, System Planning & Rates
Kathy Grimes, Administrative Secretary
Jeffrey King, Resource Analyst
Debbie Kitchin, Demographer/Economist
Nora Miller, Computer Systems Analyst
Terry Morlan, Manager, Demand Forecasting
Pete Swartz, Power System Analyst

FISH AND WILDLIFE DIVISION

Jan Carpenter, Director
Ron Eggers, Manager, Biological Services
Jody Lawrence (WA Staff, half time for Central Office) Special Assistant
Chip McConnaha, Systems Planner
John Marsh, Biologist/Planner
Marty Montgomery (ID Staff, half time for Central Office) Wildlife Coordinator
Willa Nehlsen, Biologist/Planner
Peter Paquet, Manager, Project Operations & Development
Janie Pearcy, Administrative Secretary
James Ruff, Staff Hydrologist/Water Budget Advisor
(Vacant), Research Biologist/Planner

PUBLIC INFORMATION/INVOLVEMENT DIVISION

Dulcy Mahar, Director
Judy Allender, Administrative Secretary
Carlotta Collette, Energy News Editor/Writer
Ruth Curtis, Information Coordinator
Jim Nybo, Public Liaison
Stephen Sasser, Art Director
Paula Walker, Special Projects Editor

LEGAL DIVISION

John Volkman, Acting General Counsel
Bill Hannaford, Associate Counsel
Jan Hanson, Associate Counsel
Bobbe Strizek, Administrative Secretary

ADMINISTRATIVE DIVISION

James Tanner, Director, Finance & Administration
Denise Bennett, Staff Services Assistant
Janet Blaine, Word Processing Specialist
Karen Martin, Business Manager
Ann Shelley, Staff Services Specialist
Beata Teberg, Receptionist/Secretary

DEPARTMENT OF DEFENSE
UNITED STATES OF AMERICA

DEPARTMENT OF THE ARMY
NORTH PACIFIC DIVISION, CORPS OF ENGINEERS
P.O. BOX 2870
PORTLAND, OREGON 97208

REPLY TO
ATTENTION OF

August 1, 1986

Planning Division

Mr. Robert Saxvik, Chairman
Northwest Power Planning Council
850 S.W. Broadway, Suite 1100
Portland, Oregon 97205

Dear Mr. Saxvik:

We have reviewed the draft, Council's Sixth Annual Report, and find it to be a good general summary of the year's activities. We do suggest a few changes be made however, to clarify statements that might be too broad or which are outdated.

My major concern is that the statement on page 20 regarding mainstem spill decisions be corrected, as the Corps has provided very specific explanations of the basis for its implementation of the 1986 spill program. Our comments on this and other needed changes are enclosed.

Sincerely,

NEIL E. SALING
Colonel, Corps of Engineers
Acting Division Engineer

Enclosure

AUG 4 1986

NORTH PACIFIC DIVISION
REVIEW COMMENTS ON DRAFT SIXTH ANNUAL REPORT OF THE PACIFIC NORTHWEST ELECTRIC POWER AND CONSERVATION PLANNING COUNCIL

The following review comments are offered:

a. Page 2, last paragraph (continued on page 3). "The first sentence should be modified to read: "The Northwest Power Act specified equitable treatment for Columbia Basin fish with other purposes for which facilities are operated." This change more accurately reflects the language of the Act. For the same reason the word "equal" in the first line, page 3, should be changed to "equitable."

b. Page 10, first paragraph. Based on the number of dams stated here the Council's compensation loss estimates appear to include non-Federal projects upstream from Hells Canyon. The implication is that BPA's rate payers will be footing the bill for restitution of losses attributable to non-Federal projects since as stated in the last paragraph on this page, the Council's action does not assign losses to specific projects or areas of the basin. Clarification of the rate payers responsibility would be an appropriate addition.

c. Page 10, paragraph 2, next to last sentence. Compensation is said to ". . . depend on what is biologically feasible and what is prudent. . ." We encourage the Council to also use incremental economic feasibility tests for its compensation plans. This sentence should be written as follows: ". . . depend on what is incrementally justified in economic terms, biologically feasible and what is prudent. . ."

d. Page 15, third paragraph, third sentence. "While it is true, run of salmon and steelhead were bigger in the past two years. . .". This sentence is true for steelhead but not for salmon.

e. Page 16, second paragraph, last sentence. This sentence is an overstatement and misleading. Suggest it be changed to: "The water budget provides a flow that reduces the travel time through reservoirs while dams are storing runoff to be. . ."

f. Page 17, Fish passage improvements: The first paragraph is misleading and should be made more specific. Juvenile fish bypass facilities are in place at Bonneville, John Day, McNary, Little Goose, and Lower Granite Dams. Ice Harbor and The Dalles have sluiceways that are operated as juvenile bypasses as well as studies underway to investigate installations of a bypass facility at these two projects and at Lower Monumental.

g. Page 18, next to last paragraph (8th line from bottom). The prototype screen tests were not delayed because of unanticipated major modifications. They were scheduled in an orderly manner and in conjunction with other Snake River projects. The feasibility study covering the work requires HQUSACE approval and has been submitted on schedule. Also Lower Monumental and Ice Harbor are not scheduled to have bypass facilities in place until 1991, rather than 1989.

h. Page 18, last paragraph, first sentence. It is not understood what is meant by "new designs." The work at both Granite and Goose pertains to gate raise modifications only and will be completed in 1989.

i. Page 18, next to last paragraph, last sentence. For clarification insert the word Council between "under the" and "program's".

j. Page 20, first paragraph, line six. The 90% survival rate applies to seven, not "eight", mainstem dams. Bonneville Dam has separate criteria.

k. Page 20, second paragraph, last sentence. The Corps did explain why it rejected portions of the agencies and tribes spill criteria in a letter to the Council dated April 16, 1986, which transmitted a report dated April 1986, and titled "Juvenile Fish Bypass Plan for Corps of Engineers Projects." Some of the criteria, such as spill levels and duration at Ice Harbor exceeded the Council's Fish and Wildlife Program criteria. Council members have discussed this matter with the Division Commander and it is our understanding the Corps response in Appendix 11 of the 1986 report met the Council's concern.

l. Page 20, Production Capability. This section describes in general the coordination that has taken place in connection with restoration of habitat and removal of blockages. Amount spent and number of improvements is stated, but what is missing is a statement of expected results. The amount of spawning area to be opened up and expected smolt production, needs to be stated.

m. Page 38, next to last paragraph. There seems to be a semantic problem with "double length screens." A better term would be replaced by "long screens."

Public Generating Pool

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CHELAN CO PUD • COWLITZ CO PUD • DOUGLAS CO PUD • EUGENE WATER & ELECTRIC BOARD • GRANT CO PUD • SEATTLE CITY LIGHT • TACOMA CITY LIGHT

August 5, 1986

Edward Sheets
Executive Director
Northwest Power Planning Council
Suite 1100
850 S. W. Broadway
Portland, Oregon 97205

Dear Ed:

In response to your request for comments on your draft annual report to Congress, the Public Generating Pool (PGP) offers the following comments. In the section entitled "Major 1986 Power Planning Activities" you discuss the development of conservation on a regional basis and specifically refer to conservation transfers (page 27). The PGP has worked with the Council's staff on the Conservation Transfer concept. As expressed in our report of April 21, 1986, mechanisms for the transference of federal resources (not surplus public resources) already exist.

Considerable work remains to be done on mechanisms for the transference of non-federal resources. For example, transfer of PGP resources may occur only after the nature and reliability of conservation savings and costs are better understood. The availability of PGP resources also need further study as they are presently committed under firm long term sales agreements. These and other issues were summarized by Tom Foley of your staff in his notes of the last of the last meeting (June 4, 1986) between PGP and Council staff on conservation transfer. Some of the transfer problems identified were: (1) the allocation of conservation costs to those who purchase freed up resources on a regional basis: (2) potential financing problems for conservation transfers from public service territories; and, (3) the availability of unencumbered non-federal regional resources.

Our point is that the draft annual report does not address these issues and at least interim conclusions as to the viability of conservation transfers. Furthermore, the report improperly implies the existence of a

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non-federal surplus. We hope that your final draft will better reflect this information. Attached is language which may be an appropriate substitute for that which appears at page 27.

Sincerely,

E. W. Lubking, Chairman
Operating Committee

Enclosure

cc: PGP Operating Committee
PGP Conservation Task Force Members

[Developing conservation on a regional basis:]

The Council and the Public Generating Pool (PGP) are working cooperatively on a concept whereby conservation savings may be transfered from one utility to another. Further efforts will be made by the Council, PGP and BPA to better understand the nature and reliability of conservation savings as well as costs and their allocation, financing and availability of unencumbered non-federal regional resources.

FRIENDS OF THE EARTH

5 August 1986

Edward Sheets, Executive Director
Northwest Power Planning Council
Suite 1100, 850 SW Broadway
Portland, OR 97205

Dear Mr. Sheets:

We have received the draft of the Council's Sixth Annual Report to Congress (Report). The following are the comments of the Northwest Office, Friends of the Earth.

The first sentence of the last paragraph on page 22 correctly states that the Hydropower Assessment Study begun in 1984 was intended to "identify areas ... that should be protected from hydroelectric development." While the rest of the section describing the Hydro Assessment gives a good overview of the structure of the study, it gives absolutely no indication of what progress has been made towards the goal of identifying areas that need to be protected. Certainly, Congress deserves a more detailed accounting of two years worth of work.

The hydropower site ranking, a clearly stated original objective of the study, is not mentioned at all in the Report. The site ranking is called for under the Hydropower Assessment Steering Committee charter, the Hydropower Assessment Study workplan, the Council's 1983 Power Plan and the Council's 1985 Report to Congress. The 1986 Power Plan states that "[a]ctivities that are being conducted to implement the 1983 plan should be completed, except as specifically stated in this Action Plan." (p. 9-1) The '86 Action Plan does not call for the abandonment of the site ranking.

Our office has followed the Hydro Assessment closely and has helped build a rivers constituency throughout the region which now strongly supports the Council's original intent to protect environmentally sensitive areas from future hydroelectric development. We are thus disturbed that the Report merely restates that this was the Council's original intent without giving any indication of the Council's commitment to implement such a program. The summary paragraph of the Report's Hydropower Assessment section (p.23) refers to using the study for power forecasting without making any reference to either the hydropower site ranking or protected areas designation. This implies reluctance on the part of the Council to implement these programs and

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Northwest office 4512 University Way NE Seattle, Washington 98105 (206) 633-1661

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betrays the confidence of the many individuals and state and federal agencies which have contributed significant amounts of time and effort to the Hydropower Assessment. Friends of the Earth expects that the final version of the Hydropower Assessment Study section of the Council's 1986 Report to Congress will conclude with a reaffirmation of the Council's intent to do a hydropower site ranking and designate areas to be protected from future hydroelectric development.

Sincerely,

Michael S. Rossotto

Michael S. Rossotto
Research Associate

MSR:jwp

cc: Senator Evans
Senator Gorton
Senator Hatfield
Senator Packwood

CK S. WAYLAND
Director

STATE OF WASHINGTON
DEPARTMENT OF GAME
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August 14, 1986

Carlotta Collette
Northwest Power Planning Council
850 S.W. Broadway,
Suite 1100 Portland, Oregon 97205

Dear Ms. Collette:

We have reviewed the Wildlife Section of the Council's Draft Sixth Annual Report. We felt it could be strengthened by adding a few paragraphs that describe the Wildlife Program briefly and outline progress and problems in implementing wildlife measures. I have attached some suggested language that I hope will accomplish this.

If you have any questions or comments regarding our suggested changes please contact me.

Thank you for the opportunity to provide these comments.

Sincerely,

THE DEPARTMENT OF GAME

Jack C. Howerton Power Planning
Coordinator

cc: Marty Montgomery

AUG 18 1986

While anadromous fish have received top priority in the Columbia River Basin Fish and Wildlife Program (The Program), implementation of the "wildlife" portion of The Program is also underway. A significant portion of the riparian habitat along Columbia and Snake rivers was lostand wildlife dependent on that habitat were also lost.

The Program established a step-by-step process for accomplishing the requirements of the Northwest Power Planning and Conservation Act (The Act). The steps are:

1. Develop mitigation status reviews at all Columbia Basin hydroelectric projects,

2. Conduct loss statements where warranted,

3. Conduct mitigation planning if justified,

4. Implement Protection, Mitigation and Enhancement Plans upon approval by the Council.

Mitigation Status Reviews (MSRs) have been completed for projects in Oregon, Washington and Montana. In Idaho, however, there are 13 "non-federal" projects for which MSRs have not been completed because Bonneville Power Administration (BPA) refused to fund them.

Loss studies have been completed on the Montana projects and on Willamette River projects in Oregon. Loss Studies have also been conducted on Palisades, Anderson Ranch, Black Canyon and Boise Diversion projects in Idaho. Mitigation Planning will soon be completed for Grand Coulee Project in Washington.

Mitigation Planning has been completed on the Montana projects.

Generally the Wildlife part of The Program has proceeded smoothly. There are, however, some exceptions. These are:

1. Boneville refuses to fund any activities under The Act or Program for selected hydropower projects, even though they have funded those activities on others,

2. There are often long delays in getting contracts from Bonneville to complete the steps and process outlined in The Program.

Generally coordination and cooperation among the wildlife agencies, tribes, project operators and other interested parties has been outstanding.

AUG 1 3 1986

COLUMBIA BASIN FISH AND WILDLIFE COUNCIL
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OFFICE OF
EXECUTIVE SECRETARY

AUG 0 8 1986

Robert W. Saxvik, Chairman
Northwest Power Planning Council
850 SW Broadway, Suite 1100
Portland, OR 97205

Dear Chairman Saxvik:

The following represent the joint comments of the State and Federal fish and wildlife agencies represented by the Columbia Basin Fish and Wildlife Council on the portions of your Draft Sixth Annual Report pertaining to anadromous fish.

General Comments:

1. The report provides a thorough yet concise summary of numerous activities related to the Council's Northwest Conservation and Electric Power Plan (Plan) and Columbia River Basin Fish and Wildlife Program (Program). Actions taken or to be taken by the Council and potential revisions or modifications to the Program are clearly and accurately described. The broad scope of activities in which the Council is involved is impressive. The Council is to be commended for the extent to which the Plan and Program attempt to address the purposes of the Pacific Northwest Electric Power Planning and Conservation Act.

2. There is a great deal of controversy on implementation of some Program measures. These problems do not, however, come across in the report since it is generally lacking in information relative to the effectiveness of the Fish and Wildlife Program. It is focused on what the Council and others are doing rather than how those activities are or are not accomplishing the purposes of the Act. Since there are many planning activities underway, the report gives the impression that the Council is making significant progress in remedying many of the problems that were the impetus for the Act's stringent fish and wildlife standards. In our view, however, this is a false impression. Major efforts to restore depressed upriver runs, beyond those already underway prior to adoption of the Program, have not materialized. It is now nearly five years since fish and wildlife agency and tribal recommendations were first submitted to the Council and there is still neither a goal for the Program, nor any clear commitment to the establishment of a goal. Instead, the Council seems to be placing increasing reliance on a continuing planning process.

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3. Problems in implementing the Act's provisions for equitable treatment between fish and power, and for improved fish survival at and between mainstem hydroelectric dams, are not adequately addressed. These problems are described in "A Progress Report: Mainstem Passage Problems for Juvenile Fish Before and After Enactment of the Northwest Power Act" (copy enclosed). This report was prepared by the National Marine Fisheries Service with the cooperation of the Region's other State and Federal fish and wildlife agencies. It has been reviewed and concurred in by each of those agencies.

4. The Program is heavily weighted toward planning and process, despite claims that the intent is to stress action. Furthermore, some planning needs identified by the Council have been used to justify delayed implementation of critical Program measures. For example, little progress has been made by the Council in the last two years in the establishment of research objectives, while all new research has been delayed (see specific comments).

5. In meetings and correspondence with Council members and staff the fish and wildlife agencies and tribes have been highly critical of progress under the Program and have suggested oversight hearings. This report fails to convey the level of dissatisfaction among the fisheries interests with the performance of the Council and with the success of its Program.

Specific Comments:

Page 2, paragraph 3: The conversion of the once free-flowing river into a series of slow moving reservoirs is only one of the factors causing mortality of juvenile salmon and steelhead smolts during their downstream migration. Major storage dams add to this problem by capturing the spring runoff rather than allowing it to flush these fish to the ocean. This control, and expanded powerhouse capacity at dams which juvenile fish must pass, also result in increased turbine mortality, as more and more of the water is used to generate electricity.

Page 3, paragraph 2: In the initial Program, and in subsequent amendments, the Council has tended to either modify or reject controversial recommendations (e.g. sliding scale flow recommendations became the Water Budget, designation of areas to be protected from future hydro development became a site ranking study, and new hatcheries and fish passage facilities were adopted but with numerous intermediate steps requiring subsequent Council action before construction).

Page 4, paragraph 3: A major point missing in this discussion is that the Council takes no action to insure that energy development in the Pacific Northwest is consistent with their portfolio of resources. For instance, the portfolio does not call for development of new small hydropower yet development continues throughout the region. The FERC's continued issuance of licenses and exemptions for these projects is seemingly inconsistent with the Power Plan, however, neither the Council nor the FERC are taking any action to remedy the situation.

Page 10, paragraph 2: The statement is made in this paragraph that the Program is unlikely to more than double the current run of 2.5 million fish over the next 10 to 20 years. In comments on the Council's salmon and steelhead planning issue paper, the CBFWC proposed an interim goal of 2.5 to 5.0 million fish (above current production) over the next 16 years. The time period was based on four cycles of upriver chinook salmon production. It should allow the Corps, BPA and other implementers adequate time to install bypass facilities at all dams, complete hatcheries planned or under construction and build new hatcheries, complete and achieve initial benefits of many tributary fish passage and habitat projects, and complete and implement the results of studies to improve hatchery production and to assess means of supplementing natural production with hatchery fish.

Page 12, Salmon and Steelhead Research: There is no effective consultation and coordination mechanism to ensure adequate fish and wildlife agency and tribal input into the selection, implementation and review of BPA-funded research. We have attempted each year to work with BPA in the development of a mutually satisfactory process. Failing success in this approach the CBFWC finally, in February 1986, sought the Council's assistance in the form of a recommended Program amendment. The Council's response to this problem in their 1984 amendments was to restrict any new research starts while initiating a process to establish research objectives. Now, nearly two years later the Council has yet to adopt or even propose research objectives (the issue paper referenced in this section proposed an allocation of research funds and yet one more "process" but it did not propose research objectives). In the mean time fishery agency and tribal initiatives, such as the development of a comprehensive research plan to improve the effectiveness of artificial propagation and a similar plan to assess strategies for supplementing wild stocks with hatchery outplants, have been rejected. These Council rejections have cited the need for a systemwide framework for research to provide a logical basis for assigning priorities. The Council has held to this position despite ample coordination among fisheries and power interests, clear agreement on the priority of these activities, and even the support of the funding agency (BPA). Thus it appears that real research progress is being supplanted by the Power Planning Council's quest for the perfect plan.

Pages 13-14, Fish and Wildlife Program Amendments:

The draft report does not fully portray the purpose behind the 1986 amendments or the controversy surrounding the Council's rejection of spill recommendations. The Council's report should describe both sides of controversial activities. The last paragraph on page 13 does not adequately describe the issues surrounding the Council's rejection of our spill amendment. We suggest that the following provides a more complete discussion:

> The applications rekindle earlier questions in the basin and raise a few new ones. Perhaps most significant is their re-examination of the Program's provisions for mainstem passage (e.g., spill over dams, structural juvenile fishways, and migration flows) based on experience with Program implementation. In 1986, fish and wildlife agencies and Indian tribes made several recommendations for 'mid-course corrections' to mainstem passage measures. The recommendations remove impediments to implementation, fill in gaps in the applicability of Program measures, and resolve ambiguities in Program language.
>
> Fish and wildlife agencies and Indian tribes, for example, are recommending increased spill levels at U.S. Army Corps of Engineers dams on the mainstem Columbia and lower Snake rivers. The recommendations were offered to provide interim protection of migrating fish at federal dams until effective structural fishways can be put into operation; similar spill programs are now being implemented at non-federal dams.
>
> Because of the importance of this issue, the Council accelerated its consideration ahead of the other 1986 amendments, so that improved protection could be provided for the 1986 fish migration.
>
> In the course of this expedited procedure, however, the Council rejected the agencies' and tribes' spill recommendations, although the Council did on its own motion extend existing Program measures for spill to cover part of the summer migration. The agencies and tribes disagree with the Council's action, and question its consistency with the provisions of the Act. The agencies and tribes believe that their spill recommendations are consistent with the biological objective of improving fish survival and avoiding turbine mortalities, particularly since spill is the only means available to improve survival at the dams until structural fishways can be installed and put into successful operation. The costs of the spill recommendations as interim measures are relatively modest, and by no means will interfere with an adequate, economical, or reliable power supply. Further,

> the spill recommendations complement the agencies' and tribes' other programs in the basin, including similar programs in place at non-federal Columbia River dams.
>
> The fish and wildlife agencies and Indian tribes believe that the Council should have adopted their spill recommendations, and so have asked that they be considered for adoption again in the regular course of the 1986 amendments. The Council's preliminary decision to once again reject the recommendations as part of the regular amendment process may well set the stage for the first major controversy between the agencies and tribes and the Council under the Act.

Similarly, the first paragraph on page 14 does not adequately describe the problems that led the fish and wildlife agencies and tribes to recommend the amendments. We suggest addition of the following:

> These recommendations are intended to resolve differences between the fish and wildlife agencies and tribes and federal power managers over the use of the water budget for fish flows. The power managers have taken a more limited view of the current Program language with the result that the water budget has made little difference in institutional assurances of migration flows for fish, according to a recent report by the fish and wildlife agencies.

Page 15, paragraph 1: This paragraph implies that the Council statement on losses and the estimate of the portion of that loss attributable to hydroelectric development will be completed in the next year. As indicated on pages 8-10, however, these have both been accomplished this year.

The portions of the framework study that remain undone are the production policies and plans. We have repeatedly stressed to the Council that these are fisheries management issues in which the fish and wildlife agencies and tribes must have a lead role. There is no question that the Council must also play a key role in this process. We remain concerned, however, that the Council views the use of ratepayer funds for these initiatives as making them as a forum for the development of production plans and policies solely for the Program and as such under the control of the Council. In our view, such an approach would be inconsistent with the standards of the Act which require that the Program complement the activities of the fish and wildlife agencies and tribes. We also believe that the Act anticipated ratepayer funding of such activities as subbasin planning by providing that the Program include "fish and wildlife management coordination and research and development (including funding)."

Page 15, paragraph 3: This paragraph cites increased run sizes in the last two years then says that "it would not be accurate to conclude that this is due solely to the fish and wildlife program." The clear implication is that some portion of the increase was due to the Program. We disagree. There have been improvements in Columbia Basin salmon and steelhead production in recent years including new production facilities, bypasses at some Corps' dams, an improved fish transportation program, and increased spill at Mid-Columbia Public Utility District dams to name a few. Improved environmental condition in the ocean, relatively good flow conditions in 1982-84, and further restrictions on the ocean fisheries could also have contributed. We are aware of nothing resulting directly from the Council's Program, however, that contributed to any of these factors or in any other way changed or improved salmon and steelhead runs in these years. The Council's Program will contribute to the improvement of future salmon and steelhead runs as the benefits from recent habitat and passage improvements and of other actions taken under the Program are realized.

Page 16, Water Budget: There is no question that the spring 1986 juvenile fish outmigration enjoyed good flow conditions. However, this was a function of natural runoff and was unrelated to the existence of the Water Budget. This section also states that there was good cooperation among implementing agencies in 1986 when, in fact, there was not. BPA refused to agree to the Coordinated Plan of Operation (See April 3, 1986 letter of transmittal from Brigadier General George R. Robertson, copy enclosed). Flow conditions in 1984, the first year of Water Budget implementation, were also very good during the spring migration, again due to natural runoff conditions. The only other year in which the Water Budget was implemented was 1985, and in that year natural conditions were less favorable and the Water Budget did little to improve flows. Problems with the Water Budget are summarized below. It should also be noted that the fishery agencies and tribes have proposed specific Program amendments to remedy some of these problems.

> (1) The Water Budget was sized using critical year planning assumptions, so it represents the amount of water that can be provided for fish in a critical low flow year while still meeting all power, refill and other non-power needs, yet under better-than-critical conditions, no additional water is provided.
>
> (2) The Program specifies that the Water Budget should be afforded priority over reservoir refill and secondary power. This priority is not being implemented by the federal project operators and regulators.

(3) The Water Budget accounting system identified in the Program limits the ability of the fishery agencies and tribes to manage the Water Budget for maximum fish survival. For example, for the 3.45 million acre-feet provided at Priest Rapids, the Program specifies that the difference between weekly average firm power flows of 76 kcfs and the flows requested by the agencies and tribes shall be the amount that the annual Water Budget is debited for a flow request. The agencies' and tribes' system operational request 86-19 provides a particularly good example of the effect of this accounting system. In accordance with the operating plan for 1986 BPA had forecast a flow of 115 kcfs at Priest Rapids Dam as necessary to meet power demands for the week of May 26 to June 1, 1986. Due to the amount of fish movement at that time, the agencies and tribes requested a flow at Priest Rapids of 120 kcfs. Rather than the difference of 5 kcfs, under the Program's current accounting procedures the Water Budget was charged with 120 kcfs less 76 kcfs, or 44 kcfs average for that week. Thus the Water Budget, that is already too small to protect the entire spring migration, is being used to subsidize planned power production.

(4) BPA has attempted to use their contracting authority over the Fish Passage Center (formerly the Water Budget Center), and re-interpretations of Program language, to limit the effectiveness of the Water Budget Managers as representatives of the fishery agencies and tribes. The Power Planning Council has been supportive of the agencies and tribes in the face of this BPA initiative.

(5) Idaho Power Company (IPC) does not participate in the Water Budget. This report states that "Idaho Power Company and the Bonneville Power Administration are currently negotiating a storage and energy exchange, which may improve this situation." The Council's annual report last year stated that "[t]he Council is working with all parties during 1985 to develop an acceptable water budget implementation plan for the Snake River, including Idaho Power Company." That these negotiations are taking place is apparently true, though our requests that the Water Budget managers be included in the discussions have been rejected. IPC has indicated to us that one of the problems in reaching agreement is that BPA wants to delete all reference to the Water Budget from the agreement and simply treat it as a storage account controlled by BPA to benefit power. (See Memo to The Record from Mal Karr, Water Budget Manager, May 6, 1986, copy enclosed.) Aside from these specifics, the point is that Brownlee Reservoir is the key to flow enhancement in the Snake River and there has been no progress to date in securing its adequate participation in the Water Budget.

Page 17, paragraph 1: Should be revised to read, "Nonetheless, Idaho Power Company's inability or unwillingness to make long term commitments to assist in providing water budget flows means the Snake River water Budget flows can not be met in low runoff years."

Page 17, Fish Passage Improvements: While it is true that juvenile fish bypass facilities are under study, development or construction at each of the Corps' 8 mainstem Columbia and Snake River Dams affecting anadromous fish, the Corps is not committed to their development at all projects. In a July 17, 1986 letter to Chairman Saxvik (copy enclosed), Brigadier General George R. Robertson, Division Engineer, expressed the Corps' view that transportation of juvenile fish from upriver projects and from Lyon's Ferry hatchery should be used in lieu of additional juvenile fish bypasses at Lower Monumental and Ice Harbor Dams. The transportation policy of the fish and wildlife agencies and tribes, which limits spring chinook transportation, coupled with poor collection efficiencies at these upstream projects result in the transportation of less than half of the chinook and from one half to three quarters of the steelhead leaving Idaho (Fish Transportation Oversight Team Annual Report - FY 1985, NOAA Technical Memorandum NMFS-14, February, 1986). Much of Lyon's Ferry hatchery is intended to serve as a central outplanting facility to supplement natural production by planting fish into tributaries. This management objective is clearly incompatible with a requirement that all fish be transported directly from the hatchery. Furthermore, the benefits of transportation directly from hatcheries are unproven and in fact studies done to date have demonstrated significant homing problems. The General did not elaborate on how non-transported fish would be protected at Lower Monumental and Ice Harbor Dams.

Page 17, paragraph 5: Improvements to the counting station in the north shore fish ladder at The Dalles Dam were recommended by the fishery agencies as long ago as 1970. The need for this improvement was acknowledged by the Corps and scheduled prior to the Program. That these improvements were completed ahead of the schedule in the Council's Program is just a reflection of the fact that the Program was inconsistent with the previously adopted Corps' schedule.

Page 18, paragraph 2: This paragraph provides the schedule for bypass system completion at John Day Dam. It leaves the reader with the impression that efforts to provide adequate juvenile fish protection at John Day Dam are nearing completion. It is also significant to note that post-construction evaluations in 1985 and 1986 have shown that system to be less than 50 percent (and as low as 20 percent) efficient in deflecting subyearling migrants out of turbine intakes. The problem of poor guidance efficiency for subyearling fish is not specific to John Day Dam but has been seen at McNary and The Dalles dams and at the Bonneville Dam second powerhouse. Subyearling chinook salmon stocks predominate at all of these projects.

Page 18, paragraph 4: While it is true that bypass prototype studies are underway at Lower Monumental and Ice Harbor dams, as indicated above, the Corps has not committed to implementing full bypass at these projects to the fullest extent practicable, as is required by the Act and the Program. As a result, there has been slippage that will preclude completion of the facilities in accordance with the schedule adopted by the Council.

Page 19, paragraph 1: The FERC has, as the report states, required that Chelan County PUD continue efforts to develop juvenile fish bypass at Rock Island Dam. This followed a FERC hearing in 1985. The report fails to point out, however, that the PUD has appealed this decision and that there were no bypass development studies conducted in 1986. Prior to the FERC hearings, when the extended Settlement Agreement discussions regarding Rock Island first broke down, the Council deleted the Program requirement that the facilities be completed by 1987 but retained the requirement that studies continue. The Council was, however, an active participant in the hearings and filed a brief in support of the position of the fishery agencies and tribes. The PUD estimates that 1991 is the earliest that bypass facilities could be in operation.

Page 19, paragraph 2: Based on problems experienced in 1986, at least one more year of prototype testing will be necessary at Priest Rapids Dam before a system can be designed. As a result March 1989 is now the earliest possible date for facility completion and March 1990 is more likely.

Page 19, paragraph 3: Juvenile fish bypass facilities at Wanapum Dam could be in place on the same schedule as Priest Rapids Dam but may be delayed somewhat from that schedule if Grant County PUD chooses to modify and continue its spill program including initiation of summer spill.

Page 19, paragraph 4: The prototype screening system at Rocky Reach Dam will need to be further modified and tested in 1987. As a result March 1989 is now the earliest possible bypass facility completion date and March 1990 is more likely.

Page 20, Mainstem spill decision:

The discussion of mainstem spill is incomplete, particularly in its failure to mention non-federal dams. The discussion also suffers from the same shortcomings as the discussion of the spill amendments. We believe that the discussion in the first paragraph on page 20 could be improved with following additional discussion:

> Mainstem spill programs at four of five non-federal hydroelectric projects were carried out under the terms of a Stipulated Agreement between the fish and wildlife agencies and

> Indian tribes and the utilities operating the projects. At the remaining non-federal dam, Rock Island, disputes over spill and other fishery issues resulted in lack of agreement on spill and extensive hearings before the Federal Energy Regulatory Commission. The issue of 1986 and 1987 interim spill at Rock Island is currently on appeal within the Federal Energy Regulatory Commission and spring spill activities are presently conducted under the direct oversight of a Federal administrative law judge.
>
> Levels of spill being released for interim fish protection at federal dams operated by the U.S. Army Corps of Engineers are substantially less than the levels provided at the utility-operated dams. Consequently, as noted above, the fish and wildlife agencies have recommended increased spill programs for these projects beginning in 1986. In February, 1986, the Council rejected these recommendations because it believed that increased spill would not have significant biological benefit for the fish. The fish and wildlife agencies and Indian tribes strongly disagree with this conclusion. They assert that there are small incremental increases in survival at each dam that result from spill and that no one single measure can be expected to have large fishery benefits given the complexity of the Columbia River Basin. They believe that only the systemwide program of individual measures at each project can be expected to provide significant benefits to Columbia River fish runs as a whole.

Reference is made in this section to the Corps' 1986 spill program that was submitted to the Council on April 22, 1986 and implemented by the Corps immediately. The report points out that the Corps, without suitable explanation, rejected spill criteria developed by the fishery agencies and tribes in accordance with the Council's Program. The Program calls on the Corps to incorporate these criteria into their plan. The Council has clarified that the requirement for these criteria was intended by the Council to more clearly identify "the biological judgements that should be left to the agencies and tribes." In fact, however, the entire spring migration took place without any action by the Council on this obvious inconsistency. It was not until June 18, 1986 that the Council wrote to the Corps to request the rationale for their decision (see June 18, 1986 letter from Chairman Saxvik to Colonel James R. Fry, copy enclosed).

Page 20, paragraph 3: The idea that hatcheries "promote certain genetic characteristics that may weaken the species over time," is overstated. While there can be significant problems in the management of mixed hatchery and wild stocks, we believe that hatcheries can be operated without detriment to wild stocks.

Page 21, paragraphs 1 & 2: The Council does not take enough credit for their work in promoting passage improvements in the Yakima Basin. These improvements can be expected to yield substantial fisheries benefits. The Council and others have all worked very hard to assure that these projects stay on the most ambitious schedule practicable.

Page 28, paragraph 5: The Western Energy Study under development by the Council will, according to this paragraph, explore the costs and benefits of coordinating the West's electrical power resources. The fishery agencies and tribes have been active in BPA's current activities regarding further development and use of the Southwest Intertie since Intertie sales have the potential for adversely impacting anadromous fish by providing incentives for the development of new resources and by affecting operation of existing projects. These concerns were raised in the review of amendments to the Energy Plan. We also submitted an application to amend the Fish and Wildlife Program to limit Intertie access to projects that are consistent with the Act, the Energy Plan and the Fish and Wildlife Program. This amendment was recently rejected by the Council. In our view, the Council leadership in this Western Energy Study and their apparent unwillingness to similarly address fisheries concerns is inconsistent. There is a long history in Columbia Basin hydroelectric planning of taking care of all power-related issues first and getting to the fisheries problems later, if at all. This power first, fish second approach is what the Northwest Power Act was intended to remedy.

Page 39, paragraph 1: Funding for FERC's Cluster Impact Assessment Procedure (CIAP) for the Salmon River Basin has been appropriated and the study is nearing completion. The Council's endorsement of this concept ignores the fact that all of the State and Federal fish and wildlife agencies in the region, along with many of the Treaty Indian tribes and project proponents, have expressed great concern with the CIAP process. FERC has steadfastly refused to modify the CIAP process to incorporate the comments of the fish and wildlife agencies, tribes and project proponents. Thus we believe the suitability of the CIAP process for a number of other basins in the region is highly questionable. This is especially true in that the Salmon River Basin CIAP does not include all proposed hydroelectric projects. That process did not consider preliminary permits, license applications not yet filed, or fish and wildlife issues surrounding exemption applications. The Council's endorsement of the CIAP concept here seems to conflict with their filing of an amicus brief (page 52 of this report) in the National Wildlife Federation v. FERC (presently before the 9th circuit) which argued that failure to consider all hydro projects in cumulative impact analyses was inconsistent with the Program.

Thank you for the opportunity to comment. We respectfully request that these comments and enclosures be appended to the annual report.

Sincerely,

Dale K Evans
for Rolland A. Schmitten
Chairman

Enclosures:

1. A Progress Report: Mainstem Passage Problems for Juvenile Fish Before and After Enactment of the Northwest Power Act, NMFS, May 1986.
2. Letter from Brigadier General George R. Robertson dated April 3, 1986.
3. Memo to the Record by Mal Karr dated May 6, 1986.
4. Letter from Brigadier General George R. Robertson dated 1 July 17, 1986.

cc: Columbia River Inter-Tribal Fish Commission

APPENDIX C

Excerpts from
Ninth Circuit Decision
on
Council's Constitutionality

Excerpts from the decision handed down by the U.S. Court of Appeals for the Ninth Circuit

(citations have been eliminated for readability)

"We hold that it [the Council] is a compact agency and that its members are not 'federal officers' within the meaning of the appointments clause. Congress' intention is clear from both the language of the statute, and from the legislative history, that the Council is not to be a federal agency and is not to be controlled by the federal government. The alternative establishment of the Council as a federal agency was a rejected second choice. One of the principal purposes of the Council is to represent state concerns about regional problems; Congress deemed it undesirable for a federal agency to represent state concerns to yet another federal agency."

"Petitioners and amicus ... argue that certain features of the Council are unusual and that this unusual nature militates in favor of considering the Council to be a federal rather than a compact agency ... An unusual feature of a compact does not make it invalid. A leading article by Professors Frankfurter and Landis sets the tone for the modern use of compacts. It encourages new uses ... 'Political energy has been expanded on sterile controversy over supposedly exclusive alternatives instead of utilized for fashioning new instruments adapted to new situations.'"

"There is no bar against federal agencies following policies set by nonfederal agencies. The federal government has in fact agreed to be bound by state law in several areas ... The federal government can be subject to state law where there is a clear congressional mandate and specific legislation which makes the authorization of state control clear and unambiguous."

"Petitioners argue that, even if the Council is a valid compact organization, the appointments clause of the United States Constitution requires that Council members be appointed not by the state governors, but by the President because the Council exercises significant authority over the federal government ... The appointments clause is addressed to the separation of power between the President and Congress. No court has yet held that the appointments clause prohibits the creation of an interstate planning council with members appointed by the states."

"Petitioners' theory, however, would outlaw virtually all compacts because all or most of them impact federal activities and all or most of them have members appointed by the participating states ... The Council members do not perform their duties 'pursuant to laws of the United States.' Rather, the Council members perform their duties pursuant to a compact which requires both state legislation and congressional approval."

"More important, the states ultimately empower the Council members to carry out their duties ... As with any compact, congressional consent did not result in the creation but only authorized the creation of the compact organization and the appointment of its officials. The appointment, salaries, and direction of the Council members are state-derived ... The question, thus narrowed, because Council members do not serve pursuant to federal law, makes immaterial whether they exercise some significant executive or administrative authority over federal activity."

"Because Congress neither appoints nor removes the members of this Council, the balance of power between Congress and the President is unaffected. The Council violates neither the compact nor appointments clauses of the United States Constitution. The Act establishes an innovative system of cooperative federalism under which the states, within limits provided in the Act, can represent their shared interest in the maintenance and development of a power supply in the Pacific Northwest and in related environmental concerns."

"The preparation and consideration of the plan is a matter within Council authority over which the Act accords the Council considerable flexibility. For the same reasons that we defer to BPA expertise in construing other sections of the Act, therefore, we will defer to the Council's interpretations ... if reasonable."

"Petitioners argue that it is unreasonable for the Council to interpret cost effectiveness based upon a forecast which the Council itself concedes is 'very unlikely.' Petitioners argue that the Council cannot adopt a cutoff for cost effectiveness unless it is 'more likely than not' that the predictions upon which it is based will be realized ... the Act allows the Council the flexibility to define cost effectiveness not in terms of current energy needs but by reference to whether a resource is 'forecast ... to be ... available within the time it is needed.' The Council is given the statutory mandate to make a forecast and to base its conservation plan on this forecast. Petitioners also argue that the Council is basing its plan upon projected energy costs and demands that the Council itself is unable to predict with accuracy. The Act does not require the Council to follow any particular method or timetable for forecasting the amount or cost of future energy demand; we do not find the 20-year forecast or the 4 cents/kwh cutoff to be unreasonable in light of the inherent indefiniteness of long-term energy forecasting."

"They [petitioners] contend that the plan must examine the cost effectiveness of each individual conservation measure because the Act uses the singular in referring to cost effectiveness of 'any measure or resource.' The Council's approach is correct. The Act does not require that each individual component of the model conservation standards be cost effective. The purpose of the conservation standards is to require the Council to examine cost effectiveness of standards which, when adopted in their entirety, result in cost effective energy savings. All that is required is that the model conservation standards be cost effective, when viewed as a whole."

"Petitioners argue that economic efficiency, like cost effectiveness, should properly be measured on a component-by-component basis ... Because the plan relies on marginal cost to measure economic efficiency, petitioners argue, the standards for economic feasibility are only theoretically feasible and therefore unreasonable ... The Council believes that marginal cost is a more accurate measure of energy cost than is average cost because of differences in market price for different consumers ... The plan's definition is consistent with congressional intent ... Petitioners have not shown the Council's definition of economic feasibility to be unreasonable."

"Petitioners challenge the technical, analytical process by which the Council arrived at its model conservation standards. The dispute centers on whether it was acceptable for the Council to arrive at its standards using industry engineering standards and computer simulations of energy usage, conservation and efficiency of various conservation measures ... The Act does not, however, mandate any particular method of forecasting under either the definition of cost effectiveness, or the section requiring the preparation of model conservation standards. The Council is given the direction under the statute to develop a forecast which provides model conservation standards that are cost effective, economically efficient and reflect regional geographic and climate differences ... the Council's use of four, 20-year forecasts was reasonable in light of its statutory mandate."

"The choice of methodology is a highly technical question which falls within the unique expertise of the Council. Unless an abuse of discretion is demonstrated, this court will not substitute its judgment on particular testing methodology ... The methodology used in the 1983 plan employed accepted industry standards and principles of analysis ... We express no opinion on the methodology and definitions proposed by the petitioners. Petitioners have not presented evidence before this court to raise serious doubt about the accuracy or reliability of the Council's computer simulation or the *Handbook of Fundamentals*, upon which the Council relied. We conclude that the Council did not abuse its discretion when it chose to rely upon industry standards and computer simulations in its calculations ..."

APPENDIX D

Fish and Wildlife Program Attachments

- Cover letters to fiscal year 1986 Columbia River Basin Fish and Wildlife Program Quarterly Reports. The September report was not available at publication time but will be sent on request. (Copies of the full reports are available from the Council.)
- List of completed actions in the fish and wildlife program (reprinted from the fish and wildlife program draft amendment document).
- Status report on Yakima Basin Enhancement Project.

ROBERT (BOB) SAXVIK
Chairman
Idaho

W. Larry Mills
Idaho

Morris L. Brusett
Montana

Gerald Mueller
Montana

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Kai N. Lee
Vice Chairman
Washington

Charles T. Collins
Washington

Donald W. Godard
Oregon

Leroy H. Hemmingway
Oregon

November 26, 1985

MEMORANDUM

TO: Council Members

FROM: Peter Paquet, Acting Director, Fish and Wildlife Division

SUBJECT: Quarterly Report on Five-Year Action Plan

Enclosed is a quarterly report on the status of each action item in the Fish and Wildlife Program's Action Plan (Section 1500). This report covers program implementation for the period from August 1, 1985 through October 31, 1985.

In this quarter there were several deadlines for annual reports and work plans from federal implementing agencies. In general, compliance with the schedule for submission of annual reports has been difficult for most agencies. In addition, we direct your attention to the following areas where we anticipate problems in the future:

MAINSTEM PASSAGE

1. Congress recently passed, and the president signed, an energy and water appropriations measure that provides the Corps of Engineers with $3 million to carry out mainstem juvenile fish passage studies called for in the Fish and Wildlife Program. The money will be used for biological and prototype feasibility studies in FY 1986 at The Dalles, Ice Harbor, Lower Monumental, Little Goose, and Lower Granite dams. The Corps has delayed the action plan schedule for completion of these prototype studies by one year at The Dalles and Lower Monumental dams, and by two years at Ice Harbor Dam. (Action Items 32.4.2, 32.7.2, 32.8.2,32.9.3, 32.10.1) All other projects are on or ahead of schedule.

2. In the forum of the Mainstem Passage Advisory Committee, the Council staff is presently evaluating alternatives to the 90 percent interim smolt survival objective at Corps projects. Any changes to the present interim mainstem survival objective would be considered in a public hearing process in late 1985 and early 1986 and adopted by the Council in 1986 prior to the juvenile fish passage season. (Action Item 32.2.1)

3. The Corps of Engineers has submitted an evaluation of transportation as one means of improving downstream fish passage and survival of juvenile salmon and steelhead. The Council staff has reviewed the evaluation and circulated it for review and comment. (Action Item 32.2.3)

4. The Corps of Engineers will be unable to complete the screening and bypass conduit construction work on the remaining seven turbine units at John Day Dam by the end of March 1986. Instead, the Corps plans to have three additional units screened and the bypass system operational prior to April 1986 with the remaining four units completed by the end of February 1987, one year behind the action plan schedule. (Action Item 32.5.2)

5. The Council staff is a limited intervenor in Federal Energy Regulatory Commission proceedings on fish passage at Rock Island Dam, to ensure that the Northwest Power Act and Fish and Wildlife Program are considered appropriately. A ruling by the FERC administrative law judge is expected in late 1985. (Action Items 32.12.1, 32.12.2)

WATER BUDGET AND OTHER MAINSTEM FLOWS

1. Council staff will monitor Bonneville's progress in its energy storage agreement discussions with Idaho Power Company on that utility's contribution to Water Budget flows on the Snake River. Planning meetings will be initiated in late 1985 and early 1986 to develop alternative procedures to resolve Water Budget implementation problems on the Snake River. (Action Items 33.1, 33.4, 33.5)

2. No agreement has been reached by Bonneville, the Bureau of Reclamation, and Grant County PUD on their respective responsibilities for providing spawning, incubation, and emergence flows for juvenile fish at Vernita Bar. The three parties have initiated discussions which the Council staff will monitor to resolve this issue. (Action Item 33.8)

3. The annual report on the Water Budget is due in November from Bonneville. We have been advised that this report will be submitted in February 1986 due to a change in personnel assigned by Bonneville to the project.

YAKIMA BASIN MEASURES

1. The completion of the juvenile screens at Ellensburg Town Diversion Dam could be delayed by one year to 1988. This is due to an engineering cost estimate of $1.1 million (up from $224,000) which will require Congressional approval in Bonneville's budget. (Action Item 34.4) Other projects are on schedule.

2. The Bureau of Reclamation has submitted a very brief annual report on minimum flows in the Yakima River Basin. Staff is requesting further information to satisfy the program measure. (Action Item 34.6)

OTHER MEASURES

1. Although Pacific Power & Light has not yet agreed to construct passage facilities at Condit Dam, we have received word that a study conducted jointly by the Washington Departments of Fisheries and Game and the National Marine Fisheries Service is about to be released.

2. Bonneville did not meet the May 1985 deadline for initiating construction of low-capital production facilities on the Nez Perce Reservation and has not funded the associated habitat study on the lower Clearwater River. This is due primarily to a conflict between the tribe and the state about stock management for the low-capital facility. (Action Items 34.17, 34.18)

3. Bonneville has indicated that it may not fund electrophoresis in the second year of that study. (Action Item 38.1.1)

If the staff is unable to resolve these problems, we will bring them to you for action. If you have questions about any action item, please call me or the person listed as "staff lead" on each form.

Enclosure.

ROBERT (BOB) SAXVIK
Chairman
Idaho

W Larry Mills
Idaho

Morris L. Brusett
Montana

Gerald Mueller
Montana

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Kai N. Lee
Vice Chairman
Washington

Charles T Collins
Washington

Donald W Godard
Oregon

Leroy H. Hemmingway
Oregon

February 10, 1986

MEMORANDUM

TO: Council Members
Interested Parties

FROM: Jan Chrisman, Director JC
Fish and Wildlife Division

SUBJECT: Quarterly Report on Five-Year Action Plan

Enclosed is the quarterly report, prepared by the Council's fish and wildlife staff, on the status of each action item in the five-year action plan for the Council's Columbia River Basin Fish and Wildlife Program. It covers implementation for the period from November 1, 1985 through January 31, 1986. Highlights include the following:

1. The Council will decide this month whether to change the program to increase the spill provided at mainstem Corps of Engineers projects to improve survival of downstream-migrating salmon and steelhead. (Action Items 32.2.1, 32.4.1, 32.5.1, 32.7.1, 32.8.1)

2. A number of research and evaluation efforts related to improving mainstem passage again will be thwarted because too few fish will be available for test purposes. (Action Items 32.3.2, 32.7.3, 32.7.4, 32.7.5, 32.10.1, 33.3)

3. Prototype testing will continue during 1986 to attempt to determine the causes for the relatively low fish-guidance efficiency through the bypass system at Bonneville Dam's second powerhouse. (Action Item 32.3.3)

4. Installation of bypass systems at The Dalles, John Day, Ice Harbor, and Lower Monumental dams are behind the action-plan schedule for a variety of reasons, including poor results in tests of prototype systems, funding and procurement problems, personnel and equipment shortages, and shortages of fish for test purposes. (Action Items 32.4.2, 32.4.3, 32.4.4, 32.5.2, 32.7.2, 32.7.3, 32.7.4, 32.7.5, 32.8.2, 32.8.3, 32.8.4)

5. The Corps has completed installation of a vertical slot counter at the east fishway of The Dalles Dam. (Action Item 32.4.5)

6. The Bureau of Reclamation has stated it will begin a study next year to evaluate the feasibility of using new or uncontracted storage water to help provide Water Budget flows in the Snake River Basin. (Action Item 33.7)

7. Construction of some fish passage facilities in the Yakima Basin has been delayed for a variety of reasons, including the need to modify designs and to complete preliminary studies. (Action Items 34.1, 34.2, 34.3, 34.4, 34.10)

8. The Council staff soon will complete work on the compilation of losses information, distribute an issue paper on hydropower contributions to salmon and steelhead losses, and sponsor workshops and modeling efforts, all associated with the development of goals, objectives, and other components of a framework for the salmon and steelhead portions of the program. (Action Item 36.2)

9. Formal Council review of the first wildlife mitigation proposal developed under the program will begin this month as the Council staff distributes an issue paper on the Montana Department of Fish, Wildlife and Parks proposal for mitigation of the effects of Hungry Horse Dam, operated by the Bureau of Reclamation. (Action Items 40.5, 40.8)

10. Predesign work has started on the Colville Hatchery, intended to produce resident fish as a substitution for some salmon and steelhead losses above Chief Joseph and Grand Coulee dams. (Action Item 41.2)

11. Irrigation districts and the Washington Department of Game have agreed on installation of a barrier net at Banks Lake. (Action Item 41.17)

12. Applications to amend the program are due February 18, 1986. (Action Item 42.2)

If you have questions about any item, please call me or the person designated "Staff lead" on each item.

Enclosure.
cc w/enclosure: Quarterly Report mailing list.

April 1, 1986

MEMORANDUM

TO: Council Members
Interested Parties

FROM: Jan Carpenter, Director
Fish and Wildlife Division

SUBJECT: Quarterly Status Report (February 1-April 1, 1986)

Attached are status reports on the five-year action items in the Council's Columbia River Basin Fish and Wildlife Program. Some of the highlights include these:

- The Corps intends to conduct spill-effectiveness tests this year at Lower Monumental, Ice Harbor, The Dalles, and Bonneville dams (Action Item 32.1).

- The Corps, working with fishery agency and tribal biologists and engineers, will continue to conduct and evaluate results of prototype screen modification tests at Bonneville Dam's second powerhouse this spring, in an effort to improve fish guidance efficiencies to solve bypass problems (Action Item 32.3.3).

- The Corps has completed installation of a vertical slot counter at the north fishway of The Dalles Dam more than three years ahead of schedule (Action Item 32.4.6).

- Grant County Public Utility District recently circulated a report on its 1984 transport study. The Mid-Columbia Coordinating Committee has approved a study design for short-haul transportation in 1986 (Action Item 32.11.1).

- Grant County Public Utility District expects to begin evaluation later this month of a prototype fish screen at Priest Rapids Dam (Action Item 32.11.3). Chelan Public Utility District will continue prototype testing at Rocky Reach Dam (Action Item 32.12.5).

- Bonneville and the Grant County Public Utility District are developing an agreement to define their respective responsibilities for providing flows at Vernita Bar (Action Item 33.8).

- The Council staff has distributed its report of information on salmon and steelhead losses in the Columbia River Basin and an issue paper on hydropower responsibility for those losses (Action Item 36.2).

- The Council staff is in the process of developing a detailed schedule for review of the 89 applications for program amendment which were submitted in mid-February (Action Item 42.2).

For more information, contact the staff or agency lead listed on the action item of interest.

Enclosure.

COMPLETED ACTIONS IN THE FISH AND WILDLIFE PROGRAM

Former Program Section Number	Action	Implementing Agency
201. Action Item 36.1 (as amended)	Supplemental budget for salmon and steelhead planning	Council
201. Action Item 36 2 (as amended)	Goals work plan Compilation of losses information Salmon and steelhead productivity analysis Blocked area identification Resident fish productivity analysis Related consultations	Council
201. Action Item 39.4 (as amended)	Adaptive management workshop	Council
404(a)(1). 404(a)(10) Action Item 32.13 (1st bullet)	Spill effectiveness report: Wells Dam	FERC. Douglas County PUD
404(a)(2). 404(a)(10). Action Item 32.12 (3rd bullet)	Spill effectiveness report: Rocky Reach and Rock Island dams	FERC. Chelan County PUD
404(a)(3). 404(a)(10). Action Item 32.11 (2nd bullet)	Spill effectiveness report: Priest Rapids Dam	FERC. Grant County PUD
404(a)(3). 404(a)(10). Action Item 32.11 (4th bullet)	Spill effectiveness report Wanapum Dam	FERC. Grant County PUD
404(b)(4)(B). Action Item 32.4 (2nd bullet)	Biological and prototype screen reporting: The Dalles Dam	Corps

404(b)(5). Action Item 32.3 (2nd bullet)	Report on evaluation of screens and bypass at both Corps Bonneville Dam powerhouses	Corps
404(b)(14). Action Item 32.18	Installation of juvenile bypass facility at Leaburg Canal	FERC Eugene Water and Electric Board
404(b)(17). Action Item 32 2 (3rd bullet)	Transportation report and proposal	Corps
604(a)(5), Action Item 32.5 (4th bullet)	Report on adult passage delays at John Day Dam	Corps
604(b)(3). Action Item 32.4 (5th and 6th bullets)	Installation of vertical slot counters at The Dalles Dam	Corps
604(c)(3) (1982 program)	Tumwater-Dryden adult passage feasibility study	Bonneville
704(d)(1)	White River Falls passage feasibility study	Bonneville
704(h)(2)(E)	Fish health proposal	Pacific Northwest Health Protection Committee
804(e)(1). Action Items 41.5 and 41.14	Painted Rocks Reservoir water purchase	Bonneville. FERC. Council. Montana Power Company. Montana Department of Fish Wildlife & Parks
804(e)(4).(5). Action Item 41.4	Construction of Cabinet Gorge Hatchery	Bonneville. Washington Water Power, Idaho Department of Fish and Game

804(e)(7), Action Item 41.17	Installation of barrier net at Banks Lake	Bureau of Reclamation
804(e)(8), Action Item 41.3	Develop sturgeon work plan	Bonneville
1104(c)(3), Action Items 34.26 and 39.3	Research study	Council

NOTE. Other actions completed by February 1987 also will be added to this list for publication in the revised program.

Status of Yakima Basin Projects

Project	Status
Naches-Cowiche Diversion Dam	New ladder and screen have been installed.
Horn Rapids Diversion Dam	Richland Canal screen is installed. Both right and left bank ladders have been constructed. The fish screen on Columbia Canal is about to enter service.
Sunnyside Diversion Dam	Sunnyside Canal screen and right bank ladder were completed in the spring of 1985. Left and center ladders were completed in March 1986.
Wapato Diversion Dam	West Branch ladder is completed and in service. Construction on East Branch ladder is beginning this summer. The Wapato Canal fish screen is completed and operating.
Toppenish/ Satus Unit	Construction of the fish screen and ladder began in October 1985 and is completed.
Prosser Diversion Dam	Construction has started on the Chandler Canal fish screen. A canal bypass around the screen site was completed in February 1986. The Prosser Dam right bank ladder is completed. A fish trap addition to the right bank ladder has been designed and construction is scheduled to start this fall. Construction on the Prosser Dam left and center ladders begins next spring.
Roza Diversion Dam	Construction on a new screen structure has begun. Completion of this facility is set for March 1987. Designing fish ladder modifications is underway.
Roza Power Plant	Construction of the wasteway barrier began in July 1986.
Easton Diversion Dam	Construction on the Easton fish screen is scheduled to begin in February 1987. Construction of a canal bypass will begin in October 1986. A fish ladder is being designed with construction set for April 1987.
Satus Creek	Ladder plans are complete. Construction is beginning this summer.
Toppenish Creek Diversion Dam	Construction on the fish screen is beginning this August. Construction of permanent fish ladder has been deferred until testing of a rock-gabion ladder is complete.
Town Ditch	Revised ladder and screen plans are complete. Construction is scheduled to begin in October 1987.
West Side Ditch	Design work has begun on fish screens. Construction is scheduled to begin in January 1987.
Wapatox Dam	Improvements to the current fish screens are to be constructed and funded by Pacific Power and Light Company. Negotiations are underway with PP&L, Washington State and Northwest Power Planning Council.
Taneum Diversion Dam	Planning studies for fish ladders and screens at four sites are underway.
Marion Drain Diversion	Final designs are about to begin on fish ladder. Construction is scheduled for June 1987.
Old Reservation Canal	Fish screens are in preliminary planning stages.
Snipes/Allen Canal	Construction of a fish screen will begin next summer.
Thorpe Mill Ditch	Fish screens are in the preliminary planning stages.
Stevens Ditch	Fish screens have been installed by the State of Washington.

APPENDIX E

Agenda of Council Meetings

AGENDA OF COUNCIL MEETINGS

October 10, 1985: Meeting #86 - Missoula, Montana

- Council consideration of comments on scoping for BPA's EIS on its power sales contracts
- Public comment on draft compilation of information on salmon and steelhead losses
- Public comment on modified model conservation standards proposed amendments.

October 30-31, 1985: Meeting #87 - Boise, Idaho

- Council deliberation on modified model conservation standards proposed amendments.

November 6-7, 1985: Meeting #88 - Portland, Oregon

- Council deliberation on modified model conservation standards proposed amendments.
- Council deliberation on draft power plan.

November 13-14, 1985: Meeting #89 - Portland, Oregon

- Council deliberation on draft power plan.

November 20-21, 1985: Meeting #90 - Portland, Oregon

- Council deliberation on modified model conservation standards proposed amendments.
- Council deliberation on draft power plan.

December 4-5, 1985: Meeting #91 - Portland, Oregon

- Council deliberation on model conservation standards amendments.
- Council deliberation on draft power plan.

December 11-12, 1985: Meeting #92 - Portland, Oregon

- Council deliberation on model conservation standards amendments.
- Council deliberation on draft power plan.
- Council decision to enter rulemaking on amendments to the Columbia River Basin Fish and Wildlife Program regarding spill requirements for federal hydroelectric dams.

(The scheduled December 18-19, 1985 meeting #93 was canceled.)

January 8-9, 1986: Meeting #94 - Portland, Oregon

- Council deliberation on draft power plan.
- Update on the Council's mainstem spill rulemaking.

January 15-16, 1986: Meeting #95 - Portland, Oregon

- Council deliberation on draft power plan.
- Public comment on the compilation of information on salmon and steelhead losses in the Columbia River Basin.

February 13-14, 1986: Meeting #96 - Boise, Idaho

- Council deliberation on mainstem spill rulemaking.
- Council action on compilation of losses information.
- Staff presentation on Hungry Horse Dam issue paper.
- Status report on development of salmon and steelhead production objectives.
- Council deliberation on response to comments on 1986 Power Plan.
- Council deliberation on comment on Bonneville Power Administration's resource strategy.

March 12-13, 1986: Meeting #97 - Portland, Oregon

- Staff presentation on Bonneville Power Administration, Corps of Engineers, Bureau of Reclamation, and Federal Energy Regulatory Commission fiscal year 1987 budgets.
- Staff presentation on modeling of salmon and steelhead life cycles.
- Public comment on issue paper on wildlife mitigation for Hungry Horse Dam.

April 9-10, 1986: Meeting #98 - Missoula, Montana

- Preliminary Council action on wildlife mitigation for Hungry Horse Dam.
- Staff presentation of issue paper on hydropower responsibility for salmon and steelhead losses.
- Staff briefing on Columbia River Basin Fish and Wildlife Program data base.
- Staff briefing on Columbia River Basin Fish and Wildlife Program amendment applications and process.
- Status report on Columbia River Basin Fish and Wildlife Program measures in Montana.
- Staff presentation on issue paper on Bonneville Power Administration's conservation/ modernization program.

May 14-15, 1986: Meeting #99 - Seattle, Washington

- Staff presentation on impact of oil and gas price changes on the 1986 Power Plan.
- Public comment on issue paper on Bonneville conservation/ modernization program and the resource acquisition provisions of the Northwest Power Act.
- Public comment on issue paper on hydropower responsibility for salmon and steelhead losses in the Columbia River Basin.
- Staff presentation of draft process for evaluating petitions to enter rulemaking.
- Staff briefing on salmon and steelhead production in the Columbia River Basin.

June 10-12, 1986: Meeting #100 - Ketchum, Idaho

- Staff presentation on salmon and steelhead planning paper.
- Staff presentation on research issue paper.
- Preliminary Council action on hydropower responsibility for salmon and steelhead losses in the Columbia River Basin.
- Briefing and public comment on selected mainstem applications to amend Columbia River Basin Fish and Wildlife Program.
- Public comment and Council decision on draft process for evaluating petitions to enter rulemaking.
- Public comment on impact of oil and gas price changes on the 1986 Power Plan.
- Staff presentation and public comment on Council fiscal year 1987-88 Budget.

July 9-10, 1986: Meeting #101 - Spokane, Washington

- Petition by Senator Al Williams, Chairman, Washington State Senate Energy and Utilities Committee, regarding the cost effectiveness of Washington Public Power Supply System nuclear projects 1 and 3
- Public comment on salmon and steelhead planning paper.
- Public comment on salmon and steelhead research issue paper.
- Preliminary Council action on mainstem applications to amend Columbia River Basin Fish and Wildlife Program.
- Staff presentation on draft workplan for western energy study.
- Council action on Council fiscal year 1987-88 Budget.

August 6-7, 1986: Meeting #102 - Whitefish, Montana

- Preliminary Council action on salmon and steelhead research issue paper.
- Preliminary Council action on release of Columbia River Basin Fish and Wildlife Program Draft Amendment Document
- Staff presentation and public comment on BPA/ Council issue paper on the resource acquisition provisions of the Northwest Power Act (Section 6(c)).
- Public comment on draft workplan for western energy study.
- Status report on reservoir fisheries projects in Montana.

September 17-18, 1986: Meeting #103 - Portland, Oregon

- Public comment on BPA/Council issue paper on the resource acquisition provisions of the Northwest Power Act (Section 6(c)) and Council deliberation on a draft position on a process and criterion for determining consistency under Section 6(c).
- Discussion of petition by Senator Al Williams, Chairman, Washington State Senate Energy and Utilities Committee, regarding the cost effectiveness of Washington Public Power Supply Systems nuclear projects 1 and 3.

APPENDIX F

Advisory Committees

ADVISORY COMMITTEES

FISH AND WILDLIFE ADVISORY COMMITTEES

Production Planning Advisory Committee

The Production Planning Advisory Committee provides advice regarding salmon and steelhead production planning.

Ron Eggers
Northwest Power Planning Council

Lloyd Phinney
Washington Department of Fisheries

Mike Erho
Douglas County Public Utility District

Chris Stainbrook
Warm Springs Indian Tribe

Dave Hanson
Idaho Department of Fish and Game

Jody Lawrence
Northwest Power Planning Council

Bill Bakke
Oregon Trout

Dave Heller
U.S. Forest Service

Bob Smith
National Marine Fisheries Service

Phil Roger
Columbia River Inter-Tribal Fish Commission

Losses and Goals Advisory Committee

The Losses and Goals Advisory Committee advised the Council's staff on documenting salmon and steelhead losses and developing a statement of hydropower responsibility. This committee was disbanded upon completion of those tasks.

John Marsh
Northwest Power Planning Council

Stan Detering
Bonneville Power Administration

Lawrence Goodrow
Kalispel Tribe of Indians

Dan Daley
Shoshone-Bannock Tribes

Ed Weiss
Pacific Power & Light

John Coon
Pacific Fishery Management Council

Willa Nehlsen
Northwest Power Planning Council

Jean Edwards
Columbia River Inter-Tribal Fish Commission

Chuck Junge
Private citizen

John Smith
Colville Confederated Tribes

Bill Zook
Washington Department of Fisheries

Resident Fish Substitutions Advisory Committee

This committee provides advice on substituting resident fish production in areas where salmon and steelhead can no longer be produced because of hydroelectric development.

John Marsh
Northwest Power Planning Council

Don Clark
Portland General Electric Co.

Jim Johnson
Oregon Department of Fish & Wildlife

Bill Nelson
U.S. Fish & Wildlife Service

Allan T. Scholz
Upper Columbia United Tribes

Carolyn Gassaway
League of Women Voters

Marty Montgomery
Northwest Power Planning Council

Virgil Moore
Idaho Department of Fish and Game

Paul Mongillo
Washington Department of Game

Scott Reed
Private citizen

Roger Woodworth
Washington Water Power Company

Mainstem Passage Advisory Committee

The Mainstem Passage Advisory Committee was established to provide technical advice to the Council's staff on the development of appropriate fish passage objectives for the hydropower projects on the mainstem of the Columbia River

Jim Ruff
Northwest Power Planning Council

Doug Arndt
U.S. Army Corps of Engineers

Wes Ebel
National Marine Fisheries Service

Mark Maher
Bonneville Power Administration

Frank Young
Oregon Department of Fish and Wildlife

Chip McConnaha
Northwest Power Planning Council

Stephanie Burchfield
Columbia River Inter-Tribal Fish Commission

Douglas DeHart
National Marine Fisheries Service

Al Wright
Pacific Northwest Utilities Conference Committee

Fred Olney
U.S. Fish and Wildlife Service

Hydropower Assessment Steering Committee

The Hydropower Assessment Steering Committee is a joint fish and wildlife and power planning committee advising the Council on studies designed to assess the Northwest's existing and potential hydropower sites and to keep future hydroelectric dams from harming fish and wildlife resources.

Don Godard
Northwest Power Planning Council

Stark Ackerman
U.S. Forest Service

Gordon Cheniae
Bureau of Land Management

Dick Fisher
Federal Energy Regulatory Commission

Gary Waltenbaugh
Oregon Department of Energy

Richard Giger
U.S. Fish and Wildlife Service

David Hanson
Idaho Department of Fish and Game

Dennis McDonald
Northwest Indian Fisheries Commission

Kevin Bauersfeld
Washington Department of Fisheries

Raymond J. Satterwhite
U.S. Bureau of Reclamation

Dick Woodworth
U.S. Bureau of Reclamation

Larry Korn
Oregon Department of Energy

Michael Rosotto
Friends of the Earth

Peter Paquet
Northwest Power Planning Council

Charles Bennett
National Marine Fisheries Service

Nicholas Dodge
U.S. Army Corps of Engineers

Tom France
Northern Rockies Resource Center

Richard Flemming
Hosey and Associates

Pat Graham
Montana Department of Fish, Wildlife & Parks

Rob Lothrop
Columbia River Inter-Tribal Fish Commission

Tom Giese
Pacific Northwest Utilities Conference Committee

Steve Smith
Bonneville Power Administration

Terence Thatcher
National Wildlife Federation

Jack Howerton
Washington Department of Game

Virgil Moore
Idaho Department of Fish and Game

POWER PLANNING COMMITTEES

Options

Part of the foundation of the Council's power plan is the concept of acquiring options on resources. This concept involves developing a resource in stages--designing, siting, licensing--with the understanding that at certain key decision points, construction may be accelerated, delayed or canceled depending upon the region's growth.

The options concept is new and requires demonstrations and further development before it can be depended upon. To study and deal with potential problems, a series of task forces was created, each dealing with a different resource.

These task forces are Hydropower Options, Coal Options, and Cogeneration Options. The Options Steering Committee oversees these individual task forces and coordinates their work.

The Options Steering Committee also oversees the Options Evaluation Task Force, which is looking at the value of options and their use in regional power planning. It is concerned with when, and under what conditions, the Northwest would benefit from beginning to develop a new dam, power plant or conservation program.

Options Steering Committee

Gerald Mueller
Northwest Power Planning Council

Jim Litchfield
Northwest Power Planning Council

Rob Marritz
Culp, Dwyer, Guterson & Grader

Ralph Cavanagh
Natural Resources Defense Council

Alan Davis
Montana Department of Natural Resources
and Conservation

Ed Sheets
Northwest Power Planning Council

Tom Foley
Northwest Power Planning Council

Walter E. Pollock
Bonneville Power Administration

Marc Sullivan
Northwest Conservation Act Coalition

Options Evaluation Task Force

Wally Gibson
Northwest Power Planning Council

Paul Norman
Bonneville Power Administration

David Goldstein
Natural Resources Defense Council

Larry Nordell
Montana Department of Natural Resources
and Conservation

Dick Adams
Pacific Northwest Utilities Conference Committee

Jim Lazar
Northwest Conservation Act Coalition

Avo Chilingarian
Intercompany Pool

Cogeneration Options Task Force

Tom Foley
Northwest Power Planning Council

Neil Kierluff
Bonneville Power Administration

Allen Brown
Solar Energy Association of Oregon

Ron Menke
Pacific Northwest Utilities Conference Committee

Will Lowe
Crown Zellerbach Corporation

Hydropower Options Task Force

Tom Foley
Northwest Power Planning Council

Gary Flightner
U.S. Army Corps of Engineers

Terence Thatcher
National Wildlife Federation

Joe Nadal
Pacific Northwest Generating Co.

Terrald Kent
U S Bureau of Reclamation

John Holmstrom
Bonneville Power Administration

Nan Nalder
R W Beck & Association

Larry Kellerman
Portland General Electric

Don Barklay
Idaho Power Company

Gil McCoy
Washington State Energy Office

Coal Options Task Force

Tom Foley
Northwest Power Planning Council

Robert Henriques
Washington Water Power Company

Bill Beebe
Bonneville Power Administration

Jeff King
Northwest Power Planning Council

Tim Stearns
Northwest Conservation Act Coalition

Conservation Programs Task Force

The Conservation Programs Task Force assisted the Council in assessing the results of residential, commercial and irrigation sector conservation measures called for in the 1983 Action Plan and made recommendations for the 1986 Power Plan.

Mark Cherniack
Northwest Power Planning Council

Elizabeth Thomas
Evergreen Legal Services

David Goldstein
Natural Resource Defense Council

Marc Sullivan
Northwest Conservation Act Coalition

Will Miller
Portland Energy Conservation Inc.

Kuppaswamy Iyengar
ANCO Engineers, Inc.

Kirk Hall
Bonneville Power Administration

Syd Berwager
Bonneville Power Administration

Dan Saltzman
CH2M Hill

Jane Cummins
League of Oregon Cities

Bill Kopacz
Umatilla Electric Co-op

Dick Carrig
Carrig and Dancer

Dave Schunke
Idaho Public Utilities Commission

Sue Hickey
Bonneville Power Administration

Doug Brawley
Public Power Council

Alan Davis
Montana Department of Natural Resources

Bill Elliott
Portland General Electric

Mike Burnett
Pacific Northwest Utilities Conference Committee

Al Aldrich
Snohomish County Public Utility District

State Agency Advisory Committee

The State Agency Advisory Committee was formed to ensure the involvement of the state agencies in the 1986 Power Plan's development and to maintain ongoing communication about issues of mutual interest between the Council and the state agencies.

Jim Litchfield
Northwest Power Planning Council

Frank Taussig
Oregon Public Utilities Commission

Clyde Jarvis
Montana Public Service Commission

Don Reading
Idaho Public Utilities Commission

Gene Maudlin
Oregon Public Utility Commission

Theodore Otis
Montana Public Service Commission

Stephanie Miller
Idaho Public Utilities Commission

Tony Cook
Washington Utilities & Transportation Commission

Sharon Nelson
Washington Utilities & Transportation Commission

Rick Finnigan
Washington Utilities & Transportation Commission

Conley Ward, Jr.
Idaho Public Utilities Commission

Danny Oberg
Montana Public Service Commission

Michael H. Lee
Montana Public Service Commission

Residential Model Conservation Standards Technical Task Force

The Residential Model Conservation Standards Technical Task Force reviews, with the Council's staff, the cost and performance data collected from the Residential Standards Demonstration Program and any other available information that relates to the standards.

Tom Eckman
Northwest Power Planning Council

Danny Parker
Northwest Power Planning Council

Johnny Douglass
Washington State Energy Office

Chuck Sawyer
Office of Management & Budget

Mat Northway
Eugene Water & Electric Board

Steve Loken
Southwall Builders

Jim Maloney
Oregon Department of Energy

Nancy McKay
Association of Washington Cities

David Ross
T.D. Construction

Kenneth Anderson
Pacific Power & Light Co.

Ron Perkowitz
Washington Department of Community Development

Gordon MacDonald
Pacific Northwest Utilities Conference Committee

Jim Bellamy
City of Tacoma

Dale Horton
Montana Local Government Energy Office

Don Green
Greenwood Homes

Marc Sullivan
Northwest Conservation Act Coalition

Bill Walker
Walker Construction

Debbie Wood
Oregon Housing Council

Jonathan Raab
Bureau of Governmental Research
University of Oregon

Jeff Harris
Bonneville Power Administration

Jake Fey
City of Tacoma

Alan Tabacknikou
Oregon Department of Energy

Duane Hussey
Oregon Department of Commerce

Steve Benner
Idaho Deparment of Water Resources

Alan Cooke
Pacific Northwest Utilities Conference Committee

Phil Thor
Bonneville Power Administration

Paul Cartwright
Montana Department of Natural Resources and Conservation

Bob Rohrbach
Washington Department of Community Development

Demand Forecasting Advisory Committee

The Demand Forecasting Advisory Committee assisted in developing and reviewing the range of demand forecasts used for the draft and final 1986 Power Plans.

Terry Morlan
Northwest Power Planning Council

Steve Aos
Washington State Energy Office

John Duffield
University of Montana

Bill Wardley
Pacific Power & Light Company

David Hoff
Puget Sound Power & Light

Don Hoffard
Bonneville Power Administration

Ken Corum
Northwest Power Planning Council

Lincoln Wolverton
Public Power Council

Robert Young
Direct Service Industries, Inc.

Daniel Dobbs
Montana Department of Natural Resources and Conservation

Don Reading
Idaho Public Utilities Commission

John Savage
Oregon Department of Energy

Boyd Jack
Tektronix Corporation

Mike Mace
Idaho Power Company

Gordon McDonald
Pacific Northwest Utilities Conference Committee

Economic Forecasting Advisory Committee

The Economic Forecasting Advisory Committee assisted the Council's staff in developing and reviewing the range of economic forecasts used for the draft and final 1986 Power Plans.

Terry Morlan
Northwest Power Planning Council

Charles F. Broches
Public Policy Consultant

Bill Nicholson
Potlatch Corporation

Mike Ferguson
Idaho Division of Financial Management

Phillip Brooks
Montana Department of Commerce

Charles Allcock
Portland General Electric

William Beyers
University of Washington

Geoff Moorman
Bonneville Power Administration

Gordon McDonald
Pacific Northwest Utilities Conference
Committee

Debbie Kitchin
Northwest Power Planning Council

Ron Oliveira
Oregon Department of Revenue

Lynn Michaelis
Weyerhaeuser Company

John Mitchell
U.S. Bancorp

Linc Wolverton
Public Power Council

Susan Doolittle
Port of Seattle

Phil Carver
Oregon Department of Energy

Robert Young
Direct Service Industries, Inc.

Industrial Conservation Advisory Committee

When the Council was compiling the 1983 Power Plan, it found the information available on the conservation potential of the industries of the Northwest was inadequate. The Council hired a consultant to conduct a survey of the industrial sector and assess its potential for conserving electricity. The Industrial Conservation Advisory Committee worked with the consultant to develop the survey and helped the Council develop a conservation program that will prove practical and effective for industries.

Tom Foley
Northwest Power Planning Council

Terry Boner
Northwest Pulp & Paper Association

John Bracher
Kaiser Aluminum

John Carter
Texaco

Wes Engstrom
The Boeing Company

Mark Hoehne
Longview Fiber

Will Lowe
Crown Zellerbach

Craig McDonald
Synergic Resources Corporation

Wayne Meek
Simpson Timber Co.

Dick Tyler
Weyerhaeuser Co.

William J. Nicholson
Potlatch Corporation

Buck Nowell
FMC

Scott Etzell
Northwest Food Processors

Dave Scholes
Occidental Chemical Corporation

William Denney
Synergic Resources Corporation

Ken Canon
Industrial Customers of Northwest Utilities

Lowell Baird
Carborundum

Ed Miller
Oregon Portland Cement Co.

APPENDIX G

Comments on the Draft Sixth Annual Report

Department of Energy
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208 - 3621

OFFICE OF THE ADMINISTRATOR

In reply refer to: AR

SEP 10 1986

Mr. Robert W. Saxvik, Chairman
Northwest Power Planning Council
850 SW. Broadway, Suite 1100
Portland, OR 97205

Dear Bob:

We appreciate the opportunity to review the draft of the Sixth Annual Report of the Northwest Power Planning Council. Earlier we submitted specific comments and suggested changes including a set of interlined "fixes" to the draft. We note that these comments have been accommodated in the final version of your Annual Report. This letter is for inclusion as an appendix to your Annual Report which the Council, in turn, is expected to submit to the designated committees of Congress by October 1, 1986, as provided in Section 4(h)(12)(A) of the Pacific Northwest Power Act.

BPA and the Council have worked closely together over the last 6 years as the Council has carried out its mission to develop and update both its Fish and Wildlife Program and its Northwest Conservation and Electric Power Plan. In January 1986, the Council completed its first revision of the Power Plan. The Council is currently in the process of considering amendments to the Fish and Wildlife Program for the second time and the amended Program is scheduled for completion in February 1987.

We believe that the working relationship between BPA and the Council has evolved over the years into a mature and viable relationship which is serving the best interests of the region. We respect and have carefully considered the constructive criticisms, comments, and suggestions offered by the Council and we note that BPA's comments to the Council have similarly been carefully considered and often reflected in Council decisions.

It is a tribute to our respective staffs that throughout the ups and downs of "creative tension," they have built sound and trustworthy relationships which have endured. I have been particularly pleased with recent successful efforts of our staffs to develop a joint issue paper on alternative interpretations of Section 6(c) of the Act.

SEP 12 1986

As BPA Administrator, I plan to continue to build on the strong foundation that has developed to date and to further strengthen the BPA-Council relationship.

Sincerely,

Jim Jura

Administrator

cc:
Council Members
E. Sheets, Executive Director

Washington
State Senate

Senator Al Williams
Chairman
Senator Mike McManus,
Vice Chairman
Senator Cliff Bailey
Senator Max Benitz
Senator Stuart Halsan
Senator Mike Kreidler
Senator Bob McCaslin
Senator Gerald L. Saling
Senator Lois J. Stratton

Energy and Utilities Committee
415 Senate Office Building • Olympia, Washington 98504 QW-41 • (206) 786-7455

July 10, 1986

Edward Sheets, Executive Director
Northwest Power Planning Council
850 Southwest Broadway, Suite 1100
Portland, OR 98705

Dear Ed:

Thank you for the opportunity to comment on the draft of the Council's Sixth Annual Report.

I found the report to be in most respects an accurate and informative account of the Council's ambitious activities.

The Council chose not to address petitions for rulemaking on which action has not yet been taken, including the WNP-1 and -3 petition submitted by me on July 9. This petition asks that the Power Plan be amended to call for the termination of one or both mothballed nuclear projects. In the section, "Impact of Oil and Gas Price Changes," the Draft Annual Report states: "Given the uncertainty about present prices and the flexibility built into the plan, the Council staff has recommended no change in the plan at this time." I believe it is important to note that this view has been challenged by myself and others who feel the drop in energy prices is one of several reasons to amend the Power Plan's analysis of nuclear project preservation.

Sincerely,

Al Williams

Al Williams
Chairman

AW:tl

AUG 22 1986

Alaska State Legislature

Advisory Council Members
Senator Bennett, Chairman
Senator Abood
Senator Kerttula
Senator Sackett

PO Box V
State Capitol
Juneau, Alaska 99811
Phone: (907) 465-3114

Senate Advisory Council

July 15, 1986

Edward Sheets, Executive Director
Northwest Power Planning Council
850 S.W. Broadwater, Suite 1100
Portland, OR 97205

RE: Draft Sixth Annual Report

Dear Mr. Sheets:

Having had the opportunity to review your comprehensive and well written draft report, I was somewhat confused by the sections on pages 8, 9, and 10 dealing with the salmon and steelhead resources and losses.

Specifically, on page 8, the report estimates that prior to the development in the 1800's there were between ten and 16 million salmon and steelhead. Based on the current run size of about 2.5 million fish, the total losses since development are then estimated between seven and 14 million fish, or 70% to 88% of the predevelopment total. This is at least two times higher than the estimated salmon and steelhead habitat decline of 31%; from 13,000 to 9,000 stream miles. One would have expected a closer correlation between the stream habitat losses and fish losses. Is there a reasonable explanation for this discrepancy?

Assuming that the hydropower's share of the fish losses is between five and eleven million fish seems to result in another discrepancy. If one assumes that there were ten million fish prior to development and that hydropower's share is now eleven million fish, the conclusion seems to be that hydropower resulted in fish losses greater than the amount of the initial resource.

Another issue of significance and addressed only casually in your draft is the question of what would have been the impact of all human activity since the 1800's if there had been no hydropower development? Would the fish population still have been ten to 16 million?

JUL 18 1986

While the exercise of trying to reconstruct what actually happened is worthwhile, the fact remains that the results will always remain speculative and therefore of limited benefit in settling the central issue of how much compensation, protection, and enhancement is justified. From that perspective, it seems to be much more prudent to follow a policy of expanding protection, mitigation, and enhancement measures as long as the impact on the ratepayers does not become too burdensome. Of course, quantifying "burdensome" is difficult because it is a changing figure that is dependent among other things, on the local economy and the perception of the ratepayers as to the worthiness of the cause.

With best wishes for success.

Sincerely,

Kurt S. Dzinich
Senior Advisor

KSD;crb

DIVISIONS
Light
Water
Belt Line

Please address reply to
City of Tacoma
Department of Public Utilitie
P O Box 11007
Tacoma Washington 984
(206) 383-2471

City of Tacoma
WASHINGTON

DEPARTMENT OF PUBLIC UTILITIES
E. E. Coates, Director

July 23, 1986

Mr. Edward Sheets, Executive Director
Northwest Power Planning Council
Suite 1100
850 S.W. Broadway
Portland, OR 97205

Dear Mr. Sheets:

Thank you for providing a draft copy of the Council's Sixth Annual Report to Congress for fiscal year 1986. It is clear that a significant amount of work went into its preparation. The City of Tacoma, Department of Public Utilities, wishes to provide two brief comments on the Council's report.

First, we agree the report satisfies its primary purpose, which is to fulfill the statutory requirements of Section 4(h)(12)(A) of the Northwest Electric Power Planning and Conservation Act. Second, we agree with the Council's decision to broaden the scope of the report to include several areas not expressly required by statute. The comprehensive scope of the draft report will serve to provide both Congress and Regional entities with a better overall understanding of the Council and its activities.

We encourage a continued spirit of openness and cooperation in activities for the coming year.

Yours very truly,

E. E. Coates
Director of Utilities

JUL 31 1986

28 JULY 86

GENTLEMEN

I HAVE THE FOLLOWING COMMENT ON THE SIXTH ANNUAL REPORT. ON PAGE 10, 3RD PARAGRAPH IT IS STATED THAT RESIDENT FISH PROGRAMS ARE THE ONLY PRACTICAL MEANS OF MAKING UP PERMANENT LOSSES SUCH AS SUFFERED WITH CONSTRUCTION OF GRAND COULE DAM AND CHIEF JOSEPH DAM.

I SUGGEST THAT ANY HATCHERY BUILT TO SUPPORT RESIDENT FISH SHOULD ALSO RESEARCH AND STUDY TO DETERMINE IF FISH COULD SURVIVE THE DOWNSTREAM JOURNEY THRU COULEE AND CHIEF JOSEPH TURBINES AND THEN RETURN AS FAR AS CHIEF JOSEPH. A FISH ATTRACTION SITE COULD BE BUILT AT CHIEF JOSEPH AND MANNED FOR 2-3 YEARS TO COUNT ANY RETURN OF HATCHERY MARKED SALMON. SUGGEST ALSO A REWARD (#50 ±) BE GIVEN FOR RETURN OF ANY HATCHERY IDENTIFICATION FOR SALMON COUGHT DOWNSTREAM SO AS TO GET BEST GUESS OF RETURNING SALMON COUNT OF A LIMITED FISH RELEASE SAMPLE. THEN WHEN RETURNS (IF ANY) ARE KNOWN EVALUATE IF ELEVATORS OR LADDERS COULD OR SHOULD BE BUILT TO REESTABLISH LOST RUNS

JUL 30 1986

BILL WOTTLIN
RT 1 BOX 227A, CORNELIUS OR 971

A Progress Report:

Mainstem Passage Programs for Juvenile Fish Before and After Enactment of the Northwest Power Act

National Marine Fisheries Service
Environmental and Technical Services Division
Portland, Oregon

May 1986

AUG 0 8 1986

Preface

The Pacific Northwest Electric Power Planning and Conservation Act of 1980 directed the Northwest Power Planning Council (Council) to develop a program to protect, mitigate and enhance fish and wildlife affected by extensive hydroelectric development in the Columbia Basin. The Act specifically requires that, in the case of anadromous fish, the program "provide for improved survival of such fish at hydroelectric facilities located on the Columbia River system, and ... provide flows of sufficient quality and quantity between such facilities to improve production, migration, and survival..." (emphasis added). Under the provisions of the Act, the Council solicited and received the recommendations of the Region's State and Federal fish and wildlife agencies and Indian tribes for measures to be included in the program. The first Columbia Basin Fish and Wildlife Program (Program) was adopted by the Council in November 1982; the Program was amended in October 1984; individual measures in the Program have also been amended since that time; the Council is now in the midst of another comprehensive amendment process.

In February 1986 the Council amended measures requiring the intentional spilling of water at Federal hydroelectric projects. Spill is required to provide interim protection for juvenile salmon and steelhead migrants that would otherwise pass through hydroelectric turbines. The Council's February 1986 spill amendment represented a serious blow to agency and tribal efforts to improve juvenile fish survival. Although the amendment was initiated at the request of the fish and and wildlife agencies and tribes to address specific problems experienced in implementation of the spill measures previously included in the Program, the recommendations of the agencies and tribes were rejected by the Council. As a result, fundamental problems that have seriously hampered the efforts of the fishery agencies and tribes to improve juvenile fish survival at Federal hydroelectric projects remain unresolved.

Problems in other areas similarly persist, in some cases despite relatively strong support in the Program. For example, other measures to increase juvenile fish survival, including the Water Budget to improve spring flow conditions and measures requiring the development of juvenile fish passage facilities at each mainstem dam, have been well supported by the Council. Yet in many cases the effective and timely implementation of these measures has either been rejected or simply stalled by the responsible Federal agencies.

Throughout the remainder of 1986 and into early 1987, the Power Planning Council will be considering amendments to the Fish and

Wildlife Program. Among the amendments under consideration are recommendations from the fish and wildlife agencies and tribes to address problems experienced in the implementation of flow and spill programs. Also included are recommendations from the Corps of Engineers to postpone for 2-3 years the installation of permanent juvenile fish bypass facilities at The Dalles, Ice Harbor and Lower Monumental dams. Therefore, there will be a number of decisions made in the next year regarding the future implementation of the Act's mandate, to improve the survival of salmon and steelhead at and between hydroelectric facilities on the Columbia and Snake rivers.

The intent of this paper is to facilitate that decisionmaking process by providing a review of past performance both under, and immediately prior to, the Act and the Program. The review is arranged in three sections. Sections 1 and 2 cover essentially the same material in differing levels of detail, with the former serving as an executive summary of the latter. Section 3 consists of conclusions and recommendations.

Contents

Preface

Section 1: Executive Summary

Section 2: Detailed Progress Review

- I. Introduction
- II. Background
  - A. Effects of hydroelectric projects on fish
  - B. The Northwest Power Act
- III. Role of the fishery agencies and tribes -- more complexity but little change
  - A. Committee of Fishery Operations
  - B. Fish Passage Center
  - C. Conclusions
- IV. Flows to improve juvenile survival -- little change
  - A. Flow regimes before the Fish and Wildlife Program
  - B. Flow regimes under the Fish and Wildlife Program
  - C. Conclusions
- V. Interim protection using spill -- a mixed result
  - A. Spill prior to the Fish and Wildlife Program
  - B. Mid-Columbia PUD dams
  - C. Federal dams
  - D. Conclusions
- VI. Juvenile fish bypass facilities -- slipping
  - A. Bonneville
  - B. The Dalles
  - C. John Day
  - D. McNary
  - E. Ice Harbor
  - F. Lower Monumental
  - G. Little Goose + Lower Granite
  - H. Mid-Columbia PUD dams
  - I. Bypass Facility Summary

Section 3: Conclusions and Recommendations

Section 1: Executive Summary

Among the purposes of the Northwest Electric Power Planning and Conservation Act of 1980 is the protection, mitigation and enhancement of fish and wildlife in the Columbia Basin. Realization of this purpose is to come through the Fish and Wildlife Program adopted by the Northwest Power Planning Council. Section 4(h)(6) of the Act specifies that measures to be included in the Program are to complement the activities of the fishery agencies and tribes, be supported by the best available information, use the least cost alternative for each sound biological objective, and be consistent with Indian legal rights. The only substantive requirement for these measures is that, in the case of anadromous fish, they must:

1. Improve survival at hydroelectric facilities, and
2. Provide sufficient flows to improve survival between such facilities.

These objectives were not new under the Act; they had long been recognized by the fishery agencies and tribes as the key to restoration of upriver salmon and steelhead stocks. Under the Act, however, they were, for the first time, explicitly included as a purpose, co-equal with all other purposes, for which the Federal and non-Federal hydroelectric facilities on the Columbia River and its tributaries are to be managed, operated and regulated.

Survival between projects is improved by increasing spring flows to move fish through the system in a biologically timely manner. Survival at projects is improved by moving migrating juvenile fish past projects by non-turbine routes. The latter is accomplished by screening intakes to divert fish into bypass channels from which they can be returned to the river below the dam or, at some projects, collected for transport around several dams. In the interim, at projects without structural bypasses, safe passage can also be provided by spilling water over the dams.

The National Marine Fisheries Service recently reviewed the success of the Program and other initiatives to improve juvenile fish survival on the mainstem Columbia and Snake rivers through flow enhancement, bypass facility development and interim spill. Progress in each area was reviewed for the period immediately prior to and since passage of the Northwest Power Act. Mechanisms for fishery agency and tribal participation in decisionmaking regarding these programs was also reviewed.

In general, the review concludes that there has been no substantive improvement in flows for fish migration or in the role of the fishery agencies and tribes. In the case of spill for fish passage and bypass facility development there has been some progress, most notably in response to FERC orders at the Mid-Columbia PUD projects and in the completion of previously planned construction at Corps' projects. There has also been some backsliding. Each area is summarized below.

Role of the Fishery Agencies and Tribes

The Committee on Fishery Operations (COFO) has been replaced by the Fish Passage Center as the fishery agencies' and tribes' primary coordination mechanism.

The COFO was an ad hoc group including the operating agencies, the fishery agencies, members of the Northwest Power Pool, and other interested parties. The purpose of the COFO was to "promote better coordination of reservoir system regulation." The process was entirely voluntary, there was no formal membership, no written charter and no clearly defined status. Annual fishery plans developed by the COFO were limited by constraints imposed by the dam operators, and, except where they followed a FERC order, their implementation relied on the voluntary cooperation of those operators.

The Fish Passage Center (formerly Water Budget Center) represents the fishery agencies and tribes, and coordinates their input in pre-season planning, in-season operational requests and post-season reporting on flow and spill programs, and also fish facility inspections. In 1985, after the Fish Passage Center operated in this capacity for two years, the BPA attempted to use their contracting authority over the Center and a strict reinterpretation of the Program language to prevent the Center from participating in the spill or facility operations portions of these activities. The Power Planning Council supported the fishery agencies' and tribes' view in that dispute and clarified the Program to specifically identify the Water Budget managers as the primary points of contact between fishery and power interests on matters concerning both the Water Budget and spill at Corps projects. Coordination of facility inspections was not included. Funding for this activity is now provided to the Fish Passage Center by the fishery agencies.

The Fish Passage Center has been effective in coordinating among the fishery agencies and tribes, however, there has been little progress in improving the status of those agencies and tribes relative to the power interests in system planning or operations. At the same time, however, the Corps, the Council, and most notably the BPA have added substantially to their fish and wildlife staffs and are becoming increasingly involved in fishery management decisions such as whether, when and for what stocks protective measures are needed.

Flows to Improve Juvenile Survival

As a result of the Program, the flow objective of the dam operating agencies changed from providing the fishery agencies' recommended minimum or optimum flow levels to providing the Water Budget flow regime set out in the Program. This is particularly significant when considered together with a recent BPA reinterpretation of the Water Budget measures that considers the Water Budget to be a cap on the maximum flow available for fishery purposes, regardless of the flow year. Since the size of the Water Budget was determined based on what could be provided in a critical low flow year, this BPA interpretation means that spring flows for anadromous fish are limited in all years to what could be provided under critical low flow conditions. Under better than critical flow conditions additional flow would be provided but only if it was incidental to operation for other purposes (e.g. natural runoff that could not be stored or flows to produce power).

Additionally, while the Water Budget was based in part on the fishery agencies' and tribes' recommended flow levels, it provides less than those minimum levels in the Snake River, due to concerns about the impact on refill, and in both the Columbia and Snake rivers flows are provided for a shorter duration than originally recommended. The fishery agencies and tribes have so far worked within this compromise because of the promise offered by the institutional framework established for the implementation of the Water Budget. In particular, management by the fishery agencies and tribes and priority above reservoir refill and non-firm power were viewed as significant improvements. It was expected that the agencies and tribes would be able to manage the Water Budget to provide the baseline protection needed in low flow years and an opportunity to provide for better-than-minimum protection under more favorable conditions. The Water Budget measures still hold that promise. It has not, however, been fulfilled in their implementation to date.

The Snake River component of the Water Budget has been diminished by the Corps' position regarding Dworshak Reservoir participation and by the position of Idaho Power Company (IPC) regarding Brownlee Reservoir participation. The principal problem is the priority given to refill at both reservoirs in direct opposition to the priorities established in the Program. In the Columbia River, while water has been provided from Grand Coulee, how the Water Budget is used or shaped has been preempted for secondary power production rather than being controlled by the fishery agencies and tribes to maximize juvenile fish survival as specified in the Program.

Figures 1 and 2 at the end of section 2 illustrate flow conditions between 1977 and 1985 at Priest Rapids and Lower Granite dams respectively. These figures show total flow at each project from

April 15 to June 15 as it relates to the minimum flow recommendations of the fishery agencies and tribes for the same period. It is clear from figures 1 and 2 that in most years there is more than enough water during this period to meet the recommended minimum flow levels at all times. That is, except in a drought year like 1977 (the worst in the 50-year record), providing the necessary flows is more a question of how the water is managed than one of how much water is available.

Thus compared with conditions before enactment of the Northwest Power Act, there has been little change in flows provided for fish. There have been significant problems with implementation of the Water Budget, most acutely in the Snake River. The Water Budget has not yet been put to the true test of a dry year, such as occurred in 1973 and 1977.

Interim Protection Using Spill

The annual spill program at Mid-Columbia PUD dams has been under an order of the Federal Energy Regulatory Commission (FERC), or under a negotiated agreement accepted by the FERC, since 1979. These orders or agreements have always included a specific volume of water or proportion of project flow to be spilled, and a length of time for the implementation of that spill. Spill effectiveness research has also been required, and as a result modifications to this spill program at individual projects have been made since the initial FERC order. Since 1979, there has been substantial progress in spring spill protection at Priest Rapids, Wanapum and Wells dams. There has been no change at Rocky Reach Dam, where spill has proven relatively ineffective and where bypass facility development has been accelerated, and there has been significant backsliding at Rock Island Dam. There is no summer spill program at the PUD projects.

The interim juvenile fish protection program at the Federal projects has suffered because the Corps has retained total discretion to determine objectives and acceptable impacts. Rather than specific volumes, the Corps' spill plan has always specified spill up to some percentage of instantaneous or daily average flow when significant numbers of fish are present. In practice, this discretion that the Corps retains to determine when significant numbers of fish are present (on a seasonal and diel basis), and to decide how much to impact power, has resulted in substantially less water being used for fish protection than would have been provided with a fixed volume or proportion comparable to that required at the PUD projects. The Council adopted a 90 percent survival objective but its basis and purpose are unclear. At some projects the 90 percent objective has been used to justify reduced fish passage spill. The spill program at Federal projects has also suffered from a lack of consistent, comprehensive monitoring and spill effectiveness data.

There were some improvements in the spill program at Corps projects that seemed to parallel the directives of the Council's Fish and Wildlife Program. For example, beginning in 1983, following adoption of the first Fish and Wildlife Program, the Corps increased the amount of spill provided at John Day Dam. Then in 1985, following amendment to the Fish and Wildlife Program to include the 90 percent survival objective, the Corps reinstituted spill that had been discontinued at Ice Harbor Dam and planned for fish passage spill at The Dalles Dam for the first time. Planned spill levels for fish at both projects in 1985 exceeded what the Corps determined was necessary to meet the 90 percent survival objective. In February of 1986, however, the Council again amended the spill provisions of the Fish and Wildlife Program. The 90 percent survival objective was retained but the Council clarified that it should be met in spring and summer regardless of water conditions, even if it would impact firm power. The Corps has agreed to meet this minimal level of spill but has also withdrawn commitments to meet the higher survival objective met at some projects in 1985. As a result, planned spring spill has been eliminated at Ice Harbor Dam and substantially reduced at The Dalles Dam. On the positive side, however, summer spill should be provided at these and other projects.

Concerns about the adequacy of the spill objectives currently in the Program for Federal projects are much the same as the concerns expressed regarding the Water Budget. Like the Water Budget, the spill levels included in the Program were based on what would be a reasonable spill amount (resulting in an equitable balance) under critical low flow conditions. In 1986, however, in spite of the fact that projected flow conditions are well above critical water, the Corps' spill plan includes only the minimum required by the Program. According to that plan, spill above these minimum levels may be provided at the discretion of the Corps. In comments on the Corps' 1986 plan, the Power Planning Council made it clear that the 90 percent survival objective "only established the minimum level of spill," and that additional spill should be considered. The fishery agencies and tribes have informed the Corps that they will request spills above these minimal levels consistent with their Detailed Fishery Operating Plan when there is a surplus of Federal firm power or when Federal non-firm power exists (an indication of conditions above critical water).

Juvenile Fish Bypass Facilities

Juvenile fish bypass facilities were in place at two projects in 1980 (Lower Granite and Little Goose). McNary was added in 1981, Bonneville first powerhouse in 1984, and a partial system at John Day beginning in 1985. Completion of the John Day bypass is expected in 1987. Bonneville second powerhouse was completed in 1983 but due to low fish guidance efficiency, this system is not yet considered operational. These facilities were all planned, under construction, or in operation when the Act was passed in

1980. Since passage of the Act, and in some cases after an initial delay, the Council adopted fishery agency and tribal recommendations for bypass facility development at the other three Federal projects and at the five PUD projects. (Except that the Council has since reversed itself in the case of Rock Island Dam.)

Progress on design studies at the PUD projects has generally followed a schedule agreed to by the fishery agencies, tribes and project operators. Based on that schedule, it is conceivable that permanent facilities could be in place as early as 1988-90 at all PUD projects except Rock Island Dam.

In the case of the three outstanding Federal projects (The Dalles, Ice Harbor and Lower Monumental dams), there has been less progress. Although the Program requires the completion of all three facilities by 1989, the Corps has not yet committed themselves to the development of juvenile fish passage facilities at these three projects. However, prototype studies were conducted at The Dalles Dam in 1985 and 1986, were initiated at Lower Monumental in 1986, and are scheduled to begin at Ice Harbor Dam in 1987. The Corps indicated in the 1984 amendment process that five years are required between initiation of studies and bypass completion (hence the Program requirement for 1989 completion). Using the Corps' schedule, this means that the earliest conceivable on-line dates for the facilities at The Dalles, Ice Harbor and Lower Monumental dams are 1989, 1991, and 1990 respectively. The fishery agencies and tribes believe that this schedule is overly conservative and that the Program requirement for completion by 1989 could still be met. The Corps, however, has recommended Program amendments that would result in even further slippage from these dates (to 1992, 1992 and 1991 respectively).

Figures 5 and 6 at the end of Section 2 illustrate how far we have come in providing juvenile fish bypass facilities at the 13 mainstem dams, and how far we have yet to go. It should be noted that all of the progress reflected in these figures has been at Corps' projects. Looking at the Corps' projects independently would show that over one-half of the turbine units have been screened over the last 10 years.

Section 2: Detailed Progress Review

I. Introduction

- The following review of progress in improving the survival of downstream migrating juvenile fish on the mainstem Columbia and Snake rivers will address two questions.

  Have we provided for improved survival of anadromous fish at Columbia Basin hydroelectric projects since 1980?

  Have we provided flows to improve production, migration, and survival of anadromous fish since 1980?

The answers to these questions require a brief review of the status of fishery agency and tribal efforts on three specific initiatives.

Improvements in flows during the juvenile migration to speed fish to the ocean in a biologically timely manner,

Development and operation of effective powerhouse bypass facilities to pass juvenile fish around individual dams or to collect them for transport around several dams rather than pass them through turbines, and

Interim spills to pass juvenile fish over dams where adequate structural bypass facilities are not yet in place.

In addition to progress in these specific areas, the review will also address the procedures for fishery agency and tribal participation in decision-making regarding these initiatives.

II. Background

A. Effects of Hydroelectric Projects on Fish

- The emphasis of fish protection efforts in the Columbia Basin has changed as the storage and generating capability of the Basin's hydroelectric system was developed.

- Beginning with the construction of the early projects such as Bonneville and Rock Island dams in the 1930's, the emphasis was on fish ladders to pass adult fish over the projects to the spawning grounds in the upper river.

A great deal of research was conducted on the problems associated with providing safe, efficient passage for upstream migrants (COFO, 1985).

- In the late 1960's and early 1970's the focus shifted to problems associated with dissolved gas supersaturation, caused by the entrainment of air (primarily nitrogen) in the water at high spill levels, and the resultant adverse impact on fish known as "gas bubble disease." Nitrogen continues to be one of the factors considered in management of the downstream fish migration, however, the installation of spillway deflectors, the shifting of spill among projects during the fish passage season, and powerhouse expansions that reduced overall spill amounts have all contributed to the decrease in the severity of the dissolved gas problem.

- Following an unusually low runoff in 1973, a year when the National Marine Fisheries Service estimated that less than 5 percent of the juvenile salmon and steelhead migrating out of spawning and rearing areas in Idaho survived to below Bonneville Dam, the emphasis shifted to other problems associated with downstream juvenile fish passage.

- Most losses to migrating fish are caused by delay in passage through reservoirs, turbine passage and predation. Storage of the spring freshet reduces flows further, resulting in greater mortality because of increased delay, less water being spilled and greater passage of smolts through turbines.

- Each dam and reservoir takes its toll and together they result in substantial cumulative losses, especially in years of low runoff.

- The lack of successful juvenile fish passage has been a major factor in the decline of naturally spawning upriver fish runs, a decline which has persisted for some stocks despite severe restrictions in harvest.

- For these reasons, improving passage and survival of juvenile fish at and between mainstem dams has long been one of the highest priorities of the State and Federal fish and wildlife agencies and Indian tribes.

- Accomplishment of this objective by the agencies and tribes has been hampered, however, by their lack of operational control over the dams, and the frequent disregard of their recommendations by the U.S Army Corps of Engineers, Bureau of Reclamation, Bonneville Power Administration, Federal Energy Regulatory Commission, and public and private utilities, who exercise that control.

B. The Northwest Power Act

- The fishery provisions of the Pacific Northwest Electric Power Planning and Conservation Act of 1980 were a direct response to the institutional impediments to improving Columbia Basin anadromous fish runs.

- In describing the problems the Act was intended to remedy, the legislative history explains that fishery interests believed they were ignored or treated with disdain by the operators and managers of the Columbia Basin dams with the result that flow and spill for fish protection were difficult to obtain.

- Under the new act, Congress emphasized that fish and wildlife should no longer to be given "secondary status," but should be a "co-equal partner with other uses in the management and operation of the hydroelectric projects of the region."

- The Act specifically requires the development of a Program to protect, mitigate and enhance Columbia Basin fish and wildlife, and that, in the case of anadromous fish, that Program shall:

  1) provide for improved survival of such fish at hydroelectric facilities located on the Columbia River system, and

  2) provide flows of sufficient quality and quantity between such facilities to improve production, migration, and survival of such fish as necessary to meet sound biological objectives.

III. Role of the Fishery Agencies and Tribes -- more complexity but little change

A. Committee on Fishery Operations

- In 1975 the Committee on Fishery Operations (COFO) was formed under the auspices of the Columbia River Water Management Group. The charter of the latter group states that their basic objective is to "facilitate agreement among the agencies in the interest of more effective and efficient public service in the use of Water Resources of the Pacific Northwest."

- COFO was an ad hoc group intended to promote better coordination of reservoir system regulation.

Participants included the operating agencies, the fishery agencies, members of the Northwest Power Pool and other interested parties. There was no formal membership, no written charter, and no clearly defined status. The process was entirely voluntary and relied on cooperation of the dam operators.

- In addition to the COFO, the participation of the Mid-Columbia utilities in annual operations to protect fish has been accomplished through proceedings before the FERC in all years except 1978.
- In the drought year, 1977, the COFO developed its first operating plan to provide for fishery needs in common with the use of water for power, irrigation and other project purposes.
- Through that plan, the concept of providing flow augmentation during the spring juvenile fish migration was developed and provided for the first time. Also for the first time, the project operators provided spill to pass juvenile fish over the dams. Even juvenile fish transportation, then still considered experimental, was put into full operation due to the severity of the fish loss that was expected that year.
- In succeeding years, the COFO plan became an annual exercise.
- Although it was a step in the right direction, the COFO did not provide fishery agencies and tribes with partnership or equality in management of the river as fish habitat. Lacking authority, it operated using the lowest common denominator and did the best job possible given the constraints imposed by the dam operators. While the annual plans included fish measures, they invariably were accompanied by qualifiers such as "every effort," "will attempt to," or "may allow," to condition any commitments to protect fish.
- COFO disbanded in 1984, recommending that their original goals be met through new coordination mechanisms that have evolved as a result of measures in the Fish and Wildlife Program adopted under the Northwest Power Act.

B. Fish Passage Center

- The Fish Passage Center (previously the Water Budget Center) representing the State and Federal fish and wildlife agencies and the Columbia Basin Indian tribes now serves as a coordinator for agency and tribal input in pre-season planning, in-season operational requests and post-season reporting on flow and spill programs and also fish facility inspections.

- o In 1985, after the Fish Passage Center operated in this capacity for two years, the BPA attempted to use their contracting authority over the Center and a strict reinterpretation of the Program language, to prevent the Center from participating in the spill or facility operations portions of these activities.
- o The Power Planning Council supported the fishery agencies' and tribes' view in that dispute and clarified the Program to specifically identify the Water Budget managers as the primary points of contact between fishery and power interests on matters concerning both the Water Budget and spill at Corps' projects.
- o Coordination of facility inspections was not included. Funding for this activity is now provided to the Fish Passage Center by the fishery agencies.

C. Conclusions

- o The Fish Passage Center has been effective in coordinating among the fishery agencies and tribes, however, there has been little progress in improving the status of those fishery agencies and tribes relative to the power interests in system planning or operations.
- o At the same time, however, the Corps, the Council, and most notably the BPA have added substantially to their fish and wildlife staffs and are becoming increasingly involved in fishery management decisions such as whether, when and for what stocks protective measures are needed.
- o The agencies' and tribes' seat at the table has not materialized, and in its absence, we have not yet realized Congress' intent that fish and wildlife be afforded equitable and co-equal treatment in the management, operation and regulation of the Federal and non-Federal hydroelectric facilities in the Columbia Basin.

IV. Flows to improve juvenile survival -- little change

A. Flow regimes before the Fish and Wildlife Program

- o In December 1976 the agencies made recommendations through the COFO for daily and instantaneous minimum flow levels for each of the eight Corps' projects and five PUD projects on reaches of the mainstem Columbia and Snake Rivers still accessible to anadromous fish.

Table 1 at the end of this section summarizes these recommendations for Lower Granite, Priest Rapids and The Dalles dams.

- From 1977 until the Columbia Basin Fish and Wildlife Program was adopted in 1982, the power system was operated to meet those flow levels provided that it could be done without undue impacts to other project purposes.

- The dam operators defined what were acceptable impacts to other project purposes and, in practice, fishery needs were addressed last after a long line of "hard" constraints including firm power, flood control, irrigation, and reservoir refill. Non-firm power, while not treated as an absolute, was generally afforded a higher priority than all but the most critical fishery needs.

- During this period, scheduling of thermal plant outages, marketing arrangements with Canadian and Southwest utilities, and other measures to take advantage of system flexibility to meet fishery requirements, were made a part of annual operations. In 1981, there were also some special, one-time measures instituted such as relaxation of flood control rule curves for Brownlee and Dworshak reservoirs (which has also been done this year, though not specifically for fishery purposes) and the reduction of the target refill probability from 95 to 85 percent.

- In 1981, all of these measures combined were still insufficient to provide for minimum fishery flows in the Snake River. Fishery agency flow requests were denied in mid-May due to refill concerns, then due to heavy rains the reservoirs were not only refilled but were spilling by May 28 (see Figure 2 at the end of this section).

B. Flow regimes after the Fish and Wildlife Program

- Beginning in 1984 the objective of the dam operating agencies changed from providing the fishery agencies' recommended minimum flow levels to providing the Water Budget flow regime set out in the Program.

- This is particularly significant when considered together with a recent BPA reinterpretation of the Water Budget measures that considers the Water Budget to be a cap on the maximum flow available for fishery purposes, regardless of the flow year. Since the size of the Water Budget was determined based on what could be provided in a critical low flow year, this BPA interpretation means that spring flows for anadromous fish are limited in all years to what could be provided under critical low flows conditions. Under better than critical flow conditions additional flow would be provided, but only if it was incidental to operation for other purposes (e.g. natural runoff that could not be stored or flows to produce power).

- The Water Budget was based in part on the fishery agencies' recommended minimum flow levels that had been presented to the Northwest Power Planning Council as recommendations. However, the Water Budget provides less than those minimum levels in the Snake River due to concerns about the impact on refill, and in both the Columbia and Snake rivers flows are provided for a shorter duration than originally recommended.

- The fishery agencies and tribes have so far worked within this compromise because of the promise offered by the institutional framework established for implementation of the Water Budget. In particular, management by the fishery agencies and tribes and priority above reservoir refill and non-firm power, promised to provide the baseline protection needed in low flow years and an opportunity to manage for better-than-minimum protection under more favorable conditions.

- The Water Budget measures still hold that promise. This promise has not, however, been fulfilled in their implementation to date.

- In the two years that the Water Budget has been implemented (1984-85) the Corps and BPA have created impediments to full implementation of the Water Budget by imposing additional constraints beyond those in the Program. These constraints have effectively eliminated the institutional benefits that were the basis for accepting the Council's compromising treatment of the minimum flow recommendation.

- In the Columbia River, while water has been provided from Grand Coulee, how the Water Budget is used or shaped has been preempted for secondary power production rather than being controlled by the fishery agencies and tribes to maximize juvenile fish survival as specified in the Program.

- The Snake River component of the Water Budget has been diminished by the Corps' position regarding Dworshak reservoir participation, and by the position of Idaho Power Company regarding Brownlee Reservoir participation. The principal problem is the priority given to refill at both reservoirs in direct opposition to the priorities established in the Program. A related problem in the case of Brownlee is the current flood control operation dictated by the Corps that often results in substantial drawdown of the reservoir prior to the fish migration. Idaho Power Company contends that the Corps' flood control criteria are overly conservative.

- The Act and the Program provide for BPA compensation to Idaho Power Company (IPC) for any water provided in excess of IPC's responsibility for the Hells Canyon complex (which includes Brownlee Reservoir). To date, however, these provisions have not helped to improve flows because BPA and IPC have been unable to reach agreement on a plan for such compensation.

- The end result of all these factors in the Snake River in 1985 was flow below the recommended minimum at Lower Granite for 23 days out of the 60-day Water Budget period.

C. Conclusions

- Figures 1 and 2 illustrate flow conditions between 1977 and 1985 at Priest Rapids and Lower Granite dams respectively. These figures show total flow at each project from April 15 to June 15 as it relates to the minimum flow recommendations of the fishery agencies and tribes for the same period. (April 15 to June 15 encompasses the bulk of the spring outmigration and is identified by the Council as the period during which the Water Budget is to be used to enhance flows.) As can be seen from these figures, flows have fallen below minimum recommendations in a number of years but have been relatively good since 1978. Figure 3 makes the same comparison at Lower Granite Dam using the optimum flow recommendation.

- It is clear from figures 1 and 2 that in most years there is more than enough water during this period to meet the recommended minimum flow levels at all times. That is, except in a drought year like 1977 (the worst in the 50-year record), providing the necessary flows is more a question of how the water is managed than one of how much water is available.

- The problems cited above are also evident in figures 1 and 2. At Priest Rapids Dam several years show a pattern of fluctuations between weekdays (above minimum) and weekend days (below minimum). This is a function of reduced power demand on weekends. In many cases the weekly flow would average out to the recommended minimum and, in fact, this was the objective of the power system operators in some years.

- At Lower Granite Dam it is not weekly load shape but refill that competes with fishery flows. Note how in most years flows are lower in late-April and early-May then increase in late-May and early-June. This is in part due to the timing of the snowmelt. However, it is also a reflection of operation to achieve reservoir refill objectives (95 percent probability of being 98 percent full at the start of the operating year on July 1). Reservoirs have been drawn down prior to this period for flood control so that the timing of the runoff is largely a function of the weather (i.e., it must either rain or warm up enough to cause snowmelt). Then once the runoff has started, the reservoir operators' first priority is to refill (although the Council's Program assigns a higher priority to fishery flows). As illustrated in Figure 2, however, flow could be increased to meet recommended minimum levels during the early periods without changing the total volume of flow over the April 15 - June 15 period. The disadvantages, from a power perspective, are that there would be less assurance of refill, and that the turbines at the storage projects would operate for a longer period at reduced hydraulic head (thus reducing power generating capability).

- Thus compared with conditions before enactment of the Northwest Power Act, there has been little change in flows provided for fish. There have been significant problems with implementation of the Water Budget, most acutely in the Snake River. The Water Budget has not yet been put to the true test of a dry water year, such as occurred in 1973 and 1977.

V. Interim protection using spill -- a mixed result

A. Spill before the Fish and Wildlife Program

- Prior to 1977, management of spill for fishery purposes was solely for control of dissolved gas supersaturation.

- Beginning in 1977 Federal dam operators agreed to provide some spill for fish protection even if it meant foregoing some power sales to the export market.

- BPA also offered to transfer whatever Federal surplus energy was available to the Mid-Columbia PUD's for spill programs under FERC order.

- Through the COFO process, the fishery agencies recommended 20 percent spill for both spring and summer migrations at all projects without juvenile bypass facilities.

- o In 1978, 20 percent spill was even included in the pre-season plan. However, it was subject to language to the effect that the amount, duration and shape of spill would be determined in season by the project operator. In practice, unless there was surplus in the system, 20 percent was attained only for the peak of the spring migration if at all, and no spill protection was provided for summer migrants.

B. Mid-Columbia PUD Dams

- o In 1979, based on petitions of the fishery agencies and tribes, the FERC issued an order specifying a spring spill program for the PUD projects that included a minimum of 10 percent spill for 30 days.
- o A specified volume of 780,000 acre-feet per project was set aside for fish spill, and a supplemental 100,000 acre-feet was available for an additional 15 days in the event that 80 percent of the migration did not pass in the initial 30-day period.
- o This spill program was carried over into the FERC Settlement Agreement that went into effect the following year.
- o In 1982, based on the results of studies conducted under the Settlement Agreement, the fishery agencies and tribes petitioned the FERC to increase spill required at the PUD projects to 40 percent.
- o Recognizing that the data did show 10 percent spill to be ineffective in providing juvenile fish protection, the PUD's responded to this petition with a proposal to spill 20 percent.
- o At this time the initial Fish and Wildlife Program was adopted, including a requirement for 20 percent spill at each PUD project for 30 days.
- o At a FERC conference the PUD's agreed to provide 20 percent spill at each project and to test higher levels beginning in 1983.
- o Based on these tests, modifications were made in 1984 that increased protection to as high as 30 percent at some projects.
- o Beginning in 1985 a Stipulated Agreement took effect resulting in further improvements at the PUD projects.

- At Priest Rapids and Wanapum dams the Stipulation provides for specific spill volumes of 1.5 to 2.0 MAF, roughly equivalent to 19 and 24 percent spill (daily average) at the two projects respectively (based on May flows of roughly 140 kcfs).

- At Rocky Reach Dam spill up to 10 percent of daily average flow is provided to achieve 30 percent bypass for spring chinook. This relatively low level was selected in recognition of low spill efficiency and of the accelerated bypass development program at Rocky Reach Dam.

- At Wells Dam up to 30 percent of the instantaneous flow is provided to achieve 50 percent bypass for 30 days. If 50 percent bypass can be achieved with less than 30 percent spill, then the spill period is extended.

- Rock Island Dam is not covered under the Stipulation and is subject to continuing litigation. In 1985 the operator voluntarily agreed to provide a low level of spill based on a powerhouse flow formula over fishery agency and tribal objections that the resultant spill was inadequate.

- There is no interim spill protection for summer migrants at any of the PUD dams, though limited summer spill studies are provided for in the Stipulated Agreement.

C. Federal Dams

- In contrast, the Federal projects have lacked the clearly defined spill passage objectives and much of the recent progress experienced at the PUD projects.

- Figure 4 illustrates daily average flow and spill at Lower Monumental Dam from April through July for 1977 to 1985. (Lower Monumental Dam is of particular interest because there is no adequate bypass facility.) Without additional information on hours of spill or patterns of fish movement it is not possible to draw any conclusions regarding the provision of spill for fish passage or the fishery benefits of such spill. The Figure does, however, provide some sense of the variability of spill at Lower Monumental Dam and of its dependence on total flow.

- In 1979, the fishery agencies and tribes argued that the 10 percent required at PUD projects should also be provided at Lower Monumental, Ice Harbor and the four Lower Columbia dams rather than the program outlined by the Corps. This issue was not resolved in 1979.

- As an example of the resulting spill program that year the COFO reported 3 percent of the daily average river flow at John Dam Dam was provided as fish spill from May 9 through June 10. The same report describes spill at Lower Monumental Dam as 25,000 cfs for 2 hours on each of 2 nights in early May, and 2,000 cfs surface spill for 2 to 5 hours on each of another 6 days.

- Beginning in 1980 the Corps agreed to provide up to 10 percent spill for fish protection at Lower Monumental, Ice Harbor, McNary and John Day dams if and when monitoring showed that significant numbers of fish were present. Spill was not included at The Dalles and Bonneville since the ice and trash sluiceways were to be operated and since, at Bonneville, large amounts of involuntary spill were expected.

- In practice, the discretion that the Corps retained, to determine when the fish were present (on a seasonal and a diel basis) and to decide how much to impact power, resulted in substantially less water being used for fish protection that would have been provided with a straight 10 percent as required of the PUD's.

- Spill for fish passage was discontinued at McNary Dam in 1981 when powerhouse screening was completed.

- In 1983 the Corps agreed to provide up to 50 percent of the instantaneous project flow as spill at Lower Monumental, Ice Harbor and John Day dams. However, since daily spill periods were not to exceed 4 and 5 hours at Ice Harbor and Lower Monumental respectively, this did not appreciably affect the amount of water spilled at those projects. At John Day Dam, the daily spill period was at the discretion of the on-site Corps biologist and in 1983 averaged 8.9 hours.

- In 1984, based on results of sluiceway efficiency studies in 1983, and over the objections of the fishery agencies and tribes, the Corps stopped all fish passage spill at Ice Harbor Dam.

- Between the 1984 and 1985 juvenile fish migrations the Council amended the Program to require 90 percent survival at each mainstem Corps project except Bonneville Dam where the objective was to pass 85 percent of the juvenile fish by non-turbine routes.

- There was no change in fish passage spill at Lower Monumental Dam in 1985.

- At John Day Dam spill was reduced in 1985 as a result of partial powerhouse screening.

- Improvements in 1985 included the initiation of spill at The Dalles (at up to 10 percent of daily average flow) and the resumption of spill at Ice Harbor (at up to 12.5 percent of daily average flow).

- Spill at The Dalles was discontinued on July 10 and there was no summer spill at any of the other projects even though the Corps' own criteria for significant numbers of fish were exceeded by a substantial margin.

- At Bonneville second powerhouse, three units were operated during the day throughout the spring migration, but were shut off at night in accordance with agency and tribal requests. The second powerhouse was not operated in the summer of 1985 except as needed for research.

- In August 1985, in response to concerns expressed by the fish and wildlife agencies and tribes about the implementation of the spill provisions of the Program, the Council solicited their recommendations for strengthening those measures. The fishery agencies and tribes made specific recommendations to improve the interim juvenile fish survival objective at the Corps' projects and to provide for their own participation in spill planning and implementation.

- In February 1986 the Council rejected those recommendations and reaffirmed the 90 percent survival objective. They did specify, however, that the 90 percent objective should be met in both spring and summer (until August 15) even when it would impact firm power.

- The Corps has indicated that they will likely follow that directive. However, they have also said that since they now must provide spill even at the expense of firm power, they will plan to spill only the minimum levels needed to meet the 90 percent survival regardless of water conditions.

- As a result, spring spill has been eliminated at Ice Harbor and substantially reduced (to 5 percent of daily average flow) at The Dalles. On the positive side, there may be some summer spill at Lower Monumental, John Day and The Dalles dams.

- Remaining concerns about the adequacy of the spill objectives currently in the Program for Federal projects are much the same as the concerns expressed regarding the Water Budget. Like the Water Budget, the spill levels included in the Program were based on what would be a reasonable spill amount (resulting in an equitable balance) under critical low flow conditions.

- In 1986, however, in spite of the fact that projected flow conditions are well above critical water, the Corps' spill plan includes only the minimum required by the Program. According to that plan, spill above these minimum levels may be provided at the discretion of the Corps.

- In comments on the Corps' 1986 plan, the Power Planning Council made it clear that the 90 percent survival objective "only established the minimum level of spill," and that additional spill should be considered. The fishery agencies and tribes have informed the Corps that they will request spills above these minimal levels consistent with their Detailed Fishery Operating Plan when there is a surplus of Federal firm power or when Federal non-firm power exists (an indication of conditions above critical water).

- At the time of this writing such spill requests were being made by the fishery agencies and tribes and were being rejected by the Corps. The justification for rejecting these requests has been that they are inconsistent with the Corps' spill plan.

- The Bonneville Power Administration is also once again attempting to use their contractual authority over the Fish Passage Center to undermine their effectiveness as representatives of the fishery agencies and tribes. BPA has proposed language to amend the contract under which the Water Budget managers operate to prohibit them from making any spill request that is inconsistent with the Corps' plan. The proposed language would also prevent the managers from including in their annual reports any reference to spills except "factual data-oriented discussions of the spill requests within the framework of the Corps' Juvenile Fish Passage Plan."

- This BPA action is indicative of the problem addressed by the second half of the amendment recommendation that was rejected by that Council along with the improved objectives, namely, the role of the fishery agencies and tribes in spill planning and management. The fishery agency and tribal recommendations to the Council to address the institutional and management issues were not rejected on their merit. Instead, in their response to comments (Federal Register Notice, March 5, 1986, page 7655) the Council stated that these issues "have not been adequately examined and explained by the parties in this interim rulemaking," and therefore "the Council is not attempting to resolve all the management and institutional issues raised by the commenters in this rulemaking." This is consistent with the intent expressed by the Council in consultations with the fishery agencies and tribes to defer these issues in the "fast-track" amendment so that they could be considered more thoroughly in the regular amendment process now underway.

- The Corps has no fishery management authority. Yet the Program assigns the Corps the responsibility of developing and implementing the annual spill plan. This is a fisheries protection plan and as such its assignment to the Corps for development is inappropriate.

- Agency and tribal recommendations for a jointly-agreed-upon plan, and for dispute resolution through the Council in the event that agreement could not be reached, were rejected. Instead the Council's February 1986 amendment requires the agencies to specify dates, hours and other criteria to trigger spill, and requires the Corps to incorporate those criteria into their plan. The agencies and tribes developed such criteria in consultation with the Corps and the other power interests but the Corps independently reevaluated these criteria and failed to incorporate some of them into their 1986 plan.

- The February 1986 amendment further required the Corps to consult with the Water Budget managers regarding any in-season modifications to the spill criteria. The agencies' and tribes' spill criteria identified specific issues and questions on which such consultation would be necessary based on decisions that would require in-season data. They also outlined consultation mechanisms that would overcome obstacles cited by the Corps in the review of the draft spill criteria. At the time of this writing such consultations are not taking place.

D. Conclusions

- There has been substantial progress in spring spill protection at Priest Rapids, Wanapum and Wells dams, with the cooperation of the PUD's. There has been no change at Rocky Reach and significant backsliding at Rock Island. There still is no summer spill protection at any of the PUD dams.

- At the Federal projects there has been progress in the establishment of a specific objective, the requirement of an annual plan and the requirement that the objective be met regardless of water conditions. However, the effectiveness of each of these positive factors in improving juvenile fish survival is diminished either by fundamental problems left unaddressed by the Program or by the Corps' interpretation of Program language. Either could be remedied through Program amendment.

- The 90 percent survival objective may be adequate as a baseline to be met or exceeded at all times, but it is now being treated as a ceiling despite good water conditions and a large surplus of firm energy capability in the system. This is inappropriate since it was developed using worst case power impact assumptions. It is also a difficult objective to manage for, due to the number of assumptions necessary to relate project operations to fish survival and to the lack of data on which to base such assumptions.

- The requirement of an annual plan for managing spill is good. However, as long as there is no requirement for fishery agency and tribal concurrence there will be no incentive for the Corps to produce anything but a Corps plan. Assignment of this responsibility to the Corps, as the Program does, is inappropriate. It conveys to them an authority for the management of water as fish habitat that rightly belongs with the fishery agencies and tribes. The Corps has readily accepted this authority citing their multipurpose responsibilities and the fact that it affects "their" projects. Carrying this logic to other Corps' responsibilities might lead one to believe that the Corps should manage barge traffic that passes through "their" locks or electricity generated by "their" turbines.

- Finally, the Council's decision that the 90 percent objective must be met even at the expense of firm power is a breakthrough. Whether it will have the desired effect on fish survival is not yet known but early indications are not promising. In response to the Council's February 1986 amendment the Corps has submitted project operating constraints to the coordinating group under the Pacific Northwest Coordination Agreement. These constraints will be factored into planning for the 1986/87 operating year that begins on July 1. The effect will be to de-rate the power system by the amount necessary to provide a predetermined spill volume at specified projects for specified durations. The Corps had already been including such constraints in their data submittals under the Coordination Agreement since 1983.

- In spite of the fact that the Corps has so de-rated the system, however, they still maintain that the specified spill will only be provided if they determine that it is (1) warranted based on numbers of fish present and (2) acceptable in view of power marketing conditions. In fact, the Corps had so provided for spill at The Dalles Dam in 1985 in July and August. Spill was discontinued on July 10, however, even though the Corps' data from John Day Dam immediately upstream showed daily fish passage estimates in the range of 100,000 to 600,000 fish per day until July 24 when monitoring was discontinued. (John Day Dam was used as the monitoring site for management of spill at The Dalles Dam due to an established monitoring capability. Travel time between the dams during July is likely to be in the range of 2-3 days.) Likewise the Corps has already informed the fishery agencies and tribes that spill at the level specified in their submittal under the Coordination Agreement for The Dalles Dam will not be provided in May 1986. The next test of the Council's amendment will come this summer.

VI. Juvenile Fish Bypass Facilities -- slipping

A. Bonneville Dam

- The first powerhouse design was complete and second powerhouse facilities already under construction when the Program was adopted; they were completed in 1984 and 1983 respectively.
- Due to poor fish guidance efficiency (FGE) in the second powerhouse, the Corps shut it down during the 1983 migration. (FGE is a measure of the success of the screen system in deflecting fish out of the turbine intake and into the bypass.)
- With studies underway to improve the second powerhouse, the Corps agreed to run only 4 turbine units in 1984 unless additional units were needed to meet energy demands.
- By 1985 the Program was amended to require shutdown of the second powerhouse during the migration except for research or to meet firm power demand.
- In 1985 three units in the second powerhouse were operated daily throughout the spring migration. In accordance with agency and tribal requests these units did not operate at night. With reduced flow throughout much of the summer migration the second powerhouse was not operated until September when operation was requested by the fishery agencies and tribes for adult fish collection.

B. The Dalles Dam

- The ice and trash sluiceway has been operated for fish passage since 1971.

- Research conducted from 1977 to 1982 identified operating criteria to maximize fish passage for spring migrants and estimated maximum efficiency as 40 percent.

- The Program, as amended in 1984, requires the development of a permanent juvenile fish passage plan by June 30, 1986, and bypass installation by the end of fiscal year 1989. A prototype test was conducted in 1985. Tests are continuing in the spring of 1986. The Corps reports that they will complete a feasibility report on a bypass and other alternatives by December 31, 1986. A target for bypass installation by 1989 may still be possible, but the Corps has made no commitment to bypass construction or to completion by 1989. The Corps has proposed a Fish and Wildlife Program amendment that would slip the required completion until 1992.

C. John Day Dam

- The Program requires completion of a juvenile bypass facility at John Day Dam by March 1986. When this measure and schedule were adopted the Corps had already committed to both. At the start of FY84, based on available funds in that year and projected funding levels in FY85 and beyond, the Corps indicated that construction completion would be delayed until 1988. The fishery agencies, the tribes, and the Council worked successfully to have funding restored to levels that the Corps considered necessary for a 1986 completion.

- Since that time, construction bids in excess of Corps' projections and other delays led to further schedule slippage, and construction is now expected to be complete in early 1987.

D. McNary Dam

- The Program requires continued evaluation and upgrade of the McNary Dam juvenile bypass facilities. Minor facility improvements have been accomplished since adoption of the Program. These improvements addressed specific problem areas identified in the facilities as a part of the ongoing fish transportation program.

- The major outstanding problems with the existing facilities at McNary are poor guidance efficiency for subyearling fall chinook and inadequate raceway capacity for the increasing downstream migrant population. (Fish are held in raceways while awaiting transportation to below Bonneville Dam.)

- Potential modifications to improve fall chinook guidance efficiency were studied in 1984 but no solution was identified. Over the objections of the fishery agencies and tribes, this research was dropped in 1985. The Corps proposed deferring this research again in 1986, but finally agreed that the work was of sufficient priority for funding.

- The capacity problem is one that was anticipated. As wild runs increase and major new artificial production facilities begin to attain planned production levels under the Lower Snake River Fish and Wildlife Compensation Plan, substantial increases in the number of fish arriving at McNary Dam will overwhelm the holding capacity of existing facilities. Expansion was an initial recommendation of the fishery agencies and tribes in 1981 and is already in the Program. The Corps had been considering expansion of the juvenile fish facilities as part of the McNary second powerhouse studies, but those studies have been discontinued. The fishery agencies and tribes have proposed a Program amendment to require completion by 1988. The Corps' current schedule indicates a planned completion in fiscal year 1992.

E. Ice Harbor Dam

- Structural modifications and operational studies to maximize juvenile fish collection efficiency of the ice and trash sluiceway were completed in 1983. The sluiceway has been operated at maximum efficiency since that time.

- Since the sluiceway alone provides inadequate juvenile fish protection, the Program requires juvenile bypass prototype studies in 1985, development of a permanent juvenile fish passage plan by July 31, 1986, and installation of a juvenile bypass system by 1989. There has been no progress on these measures. The prototype studies are now scheduled for 1987, but the Corps has indicated that they view these studies as relatively low priority and that they could therefore be delayed still further if funding is limited.

- The 1985 completion date for prototype studies was based on a schedule that the Corps said would be necessary for a 1989 completion. Therefore there is little likelihood that needed improvements could be implemented by 1989. The Corps has proposed a Fish and Wildlife Program amendment that would slip the required completion until 1992.

F. Lower Monumental Dam

- The Program requires prototype studies in 1985, development of a permanent juvenile fish passage plan by July 31, 1986, and installation of a juvenile bypass system by 1989. There was no progress on these measures prior to this year, but prototype studies are now underway. These studies are part of what the Corps terms as a feasibility study that is planned for completion in December 1986.

- A target for bypass installation by 1989 may still be possible, but there has been no indication that the Corps has made a commitment to bypass construction or to completion by 1989. The Corps has proposed a Fish and Wildlife Program amendment that would slip the required completion until 1991.

G. Little Goose and Lower Granite Dams

- Major modifications at Lower Granite in 1982 and 1983 included a new fish separator, expanded raceway capacity, and a log boom to divert floating debris. At Little Goose numerous interim measures have been implemented to reduce injury and mortality and more permanent modifications (involving near complete reconstruction of the facility) are scheduled for completion in 1989. These activities have been an ongoing part of the fish transportation program since its inception.

- Outstanding problems at these facilities are poor fish guidance efficiency for spring chinook and delay in reconstruction of the Little Goose facility. The Program-specified completion date of 1987 for the latter has had no effect on the Corps' schedule. The Program does not specifically address the guidance efficiency problem. However, research in 1985 confirmed earlier studies indicating that a modification to raise the operating gates would substantially improve guidance at Lower Granite Dam. The same modification is being tested in 1986 at Little Goose Dam. The fishery agencies and tribes have urged the Corps to move forward as fast as is possible and have submitted a Program amendment to specify a schedule.

H. Mid-Columbia PUD Projects

- When first adopted, the Program required installation of complete juvenile fish bypass systems by 1987 at all projects except Priest Rapids where a short term study of transportation was allowed to run through 1988. In the 1984 amendments Wanapum was slipped to 1988, Priest Rapids was added for 1988 completion, and the target completion date for Rock Island was deleted.

- While there have been a number of design studies conducted under the direction of the FERC Settlement Agreement and the 1985 Stipulation, there have been no facilities nor even facility designs developed for these projects to date. Ongoing studies at Rocky Reach and Priest Rapids dams could lead to screen bypass development, but 1989 is now the earliest feasible date for their operation.

I. Bypass Facility Summary

- Complete juvenile fish bypass facilities were in place at Lower Granite and Little Goose prior to 1980. Facilities were added at McNary in 1981, at Bonneville in 1984 (first powerhouse), and a partial system at John Day in 1985. Completion of the John Day facility is expected in 1987. Facilities at Bonneville second powerhouse were completed in 1983 but due to low fish guidance efficiency, the juvenile fish bypass system is not yet considered operational. These facilities were all planned, under construction, or in operation when the Act was passed in 1980. Since passage of the Act and adoption of the Program, and in some cases after an initial delay, the Council has adopted fishery agency and tribal recommendations for bypass facility development at the other three Federal projects and at the five PUD projects (the Council has since reversed itself in the case of Rock Island Dam).

- Progress on design studies at the PUD projects has generally followed a schedule agreed to by the fishery agencies, tribes and project operators. Based on that schedule, it is conceivable that permanent facilities could be in place as early as 1988-90 at all PUD projects except Rock Island. In the case of the three outstanding Corps projects, there has been less progress. Prior to this year, studies had been conducted only at The Dalles Dam (1985). Studies are continuing at The Dalles and were initiated at Lower Monumental in 1986. Based on the Corps' statements in the last amendment process that five years are required between initiation of studies and bypass completion, the earliest online dates for these two facilities are 1989 and 1990 respectively. In neither case, however, has the Corps committed to development of these facilities.

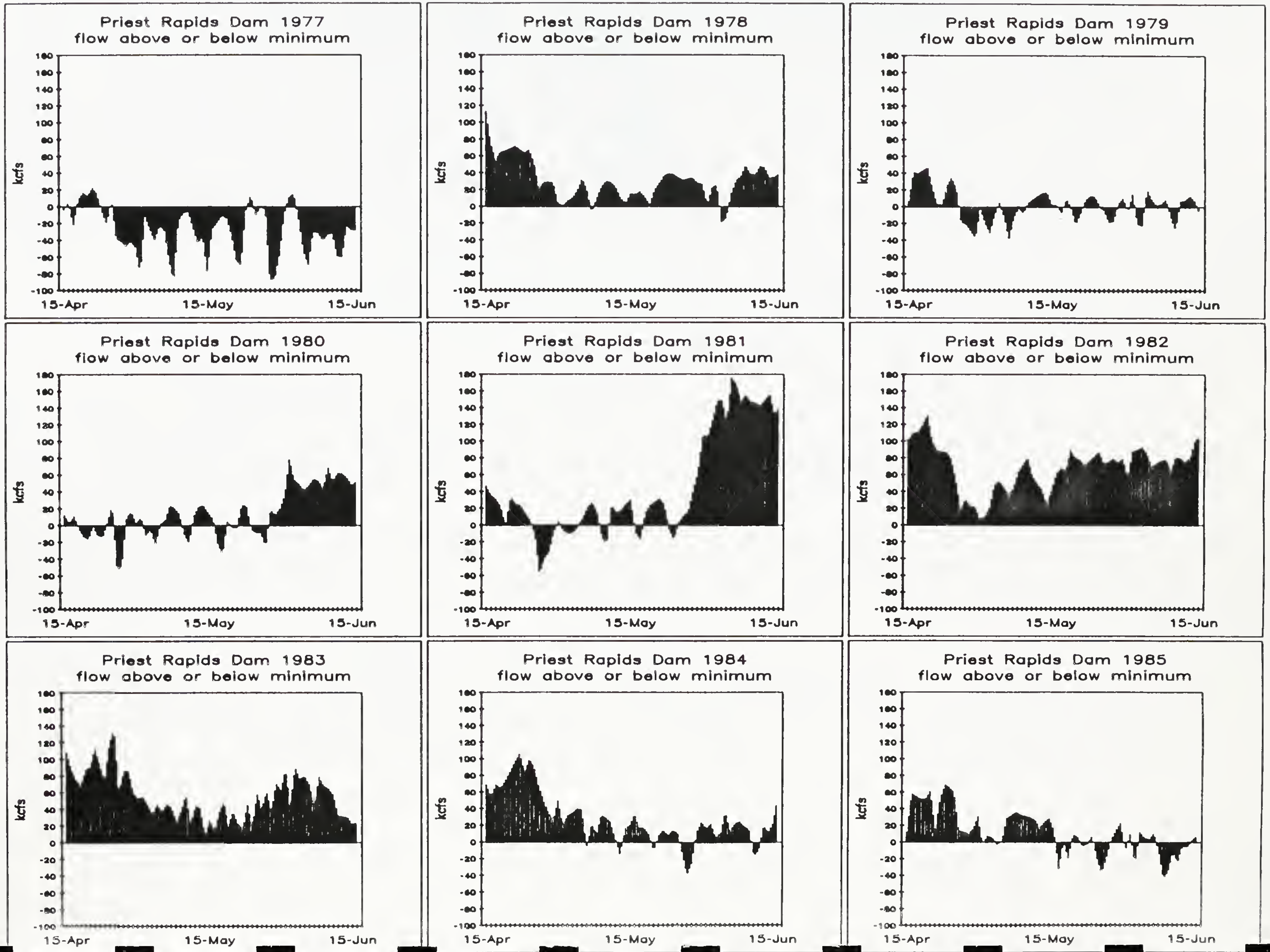
- Figures 5 and 6 at the end of this section illustrate how far we have come in providing juvenile fish bypass facilities at the 13 mainstem dams, and how far we have yet to go. It should be noted that all of the progress reflected in these figures has been at Corps' projects. Looking at the Corps' projects independently would show that over one-half of the turbine units have been screened over the last 10 years.

Table 1: Flow Recommendations of the Fishery Agencies and Tribes

	Minimum			Optimum		
	Lower Granite	Priest Rapids	The Dalles	Lower Granite	Priest Rapids	The Dalles
	kcfs					
April 16–25	85	70	160	110	100	225
April 26–30	85	110	200	120	120	250
May 1–31	85	130	220	140	140	300
June 1–15	85	110	200	120	120	250

Source: Initial Recommendations for the Protection, Mitigation, and Enhancement of Anadromous Fish in the Columbia River Basin, Fish and Wildlife Agencies and Tribes, November 13, 1981

FIGURE 1


Priest Rapids Dam 1977
flow above or below minimum

Priest Rapids Dam 1978
flow above or below minimum

Priest Rapids Dam 1979
flow above or below minimum

Priest Rapids Dam 1980
flow above or below minimum

Priest Rapids Dam 1981
flow above or below minimum

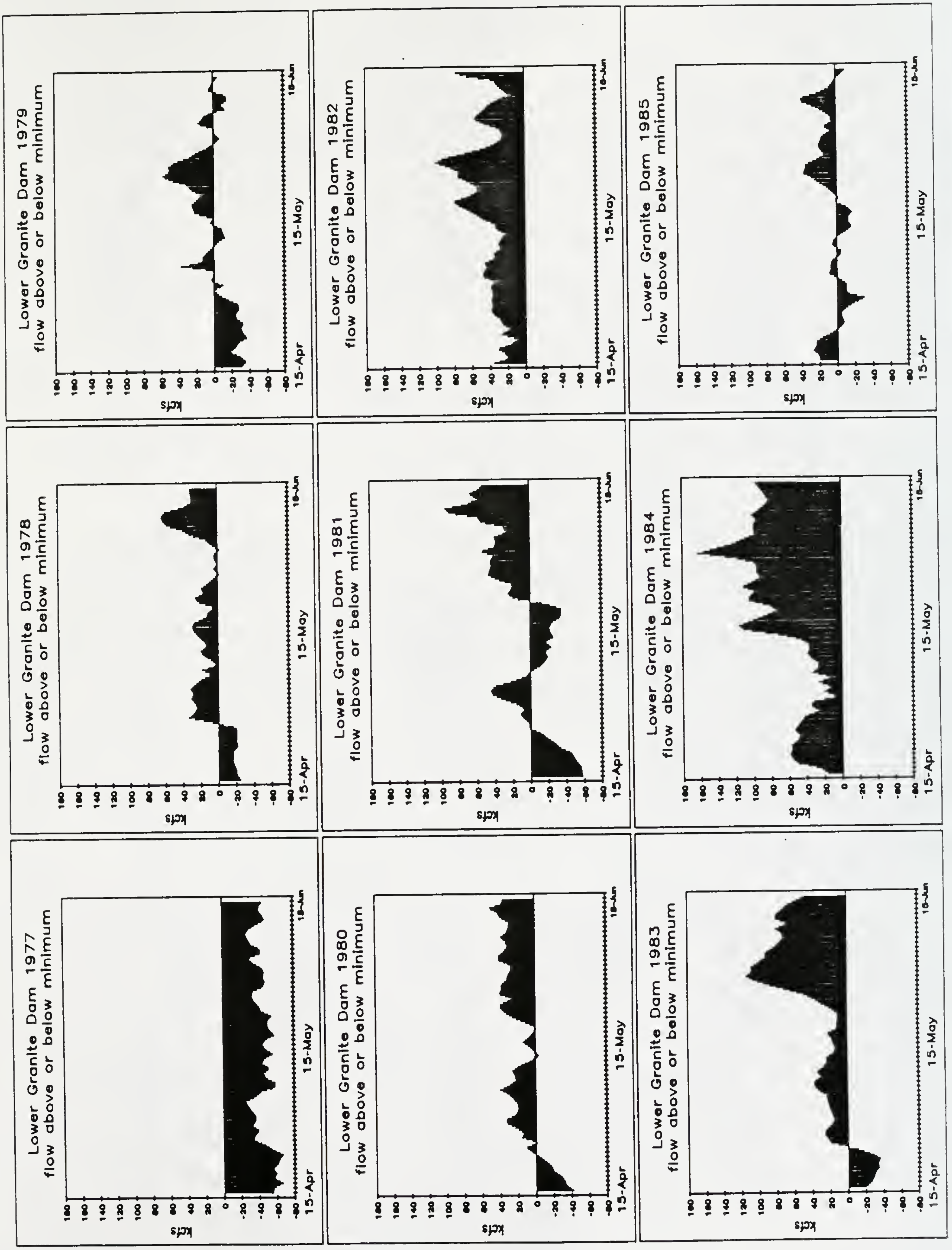
Priest Rapids Dam 1982
flow above or below minimum

Priest Rapids Dam 1983
flow above or below minimum

Priest Rapids Dam 1984
flow above or below minimum

Priest Rapids Dam 1985
flow above or below minimum

FIGURE 2


Lower Granite Dam 1977
flow above or below minimum
Lower Granite Dam 1978
flow above or below minimum
Lower Granite Dam 1979
flow above or below minimum
Lower Granite Dam 1980
flow above or below minimum
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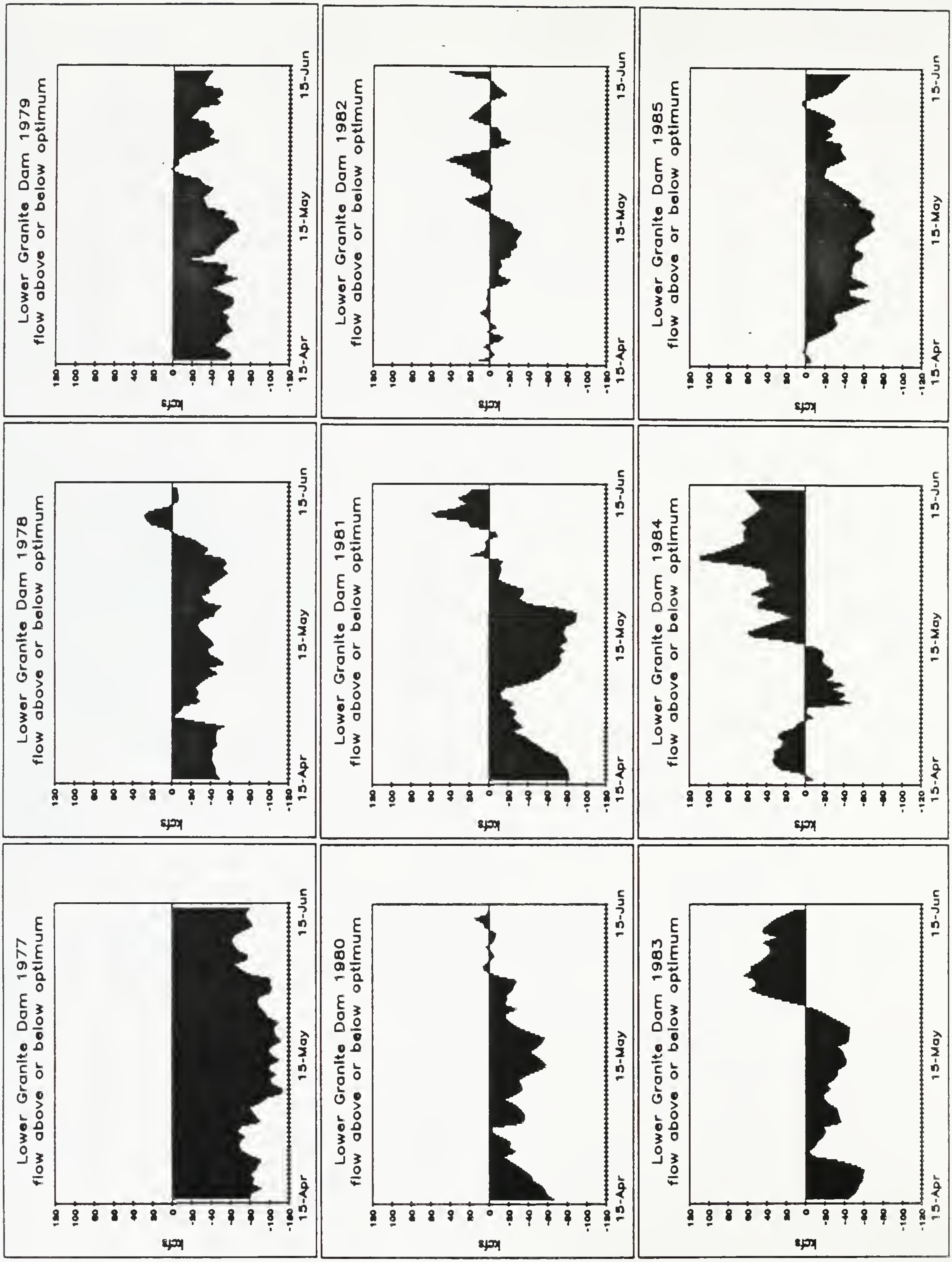
flow above or below minimum
Lower Granite Dam 1982
flow above or below minimum
Lower Granite Dam 1983
flow above or below minimum
Lower Granite Dam 1984
flow above or below minimum
Lower Granite Dam 1985
flow above or below minimum
kcfs
180
160
140
120
100
80
60
40
20
0
-20
-40
-60
-80
15-Apr
15-May
15-Jun

FIGURE 3


Lower Granite Dam 1977
flow above or below optimum
Lower Granite Dam 1978
flow above or below optimum
Lower Granite Dam 1979
flow above or below optimum
Lower Granite Dam 1980
flow above or below optimum
Lower Granite Dam 1981
flow above or below optimum
Lower Granite Dam 1982
flow above or below optimum
Lower Granite Dam 1983
flow above or below optimum
Lower Granite Dam 1984
flow above or below optimum
Lower Granite Dam 1985
flow above or below optimum
kcfs
120
100
80
60
40
20
0
-20
-40
-60
-80
-100
-120
15-Apr
15-May
15-Jun

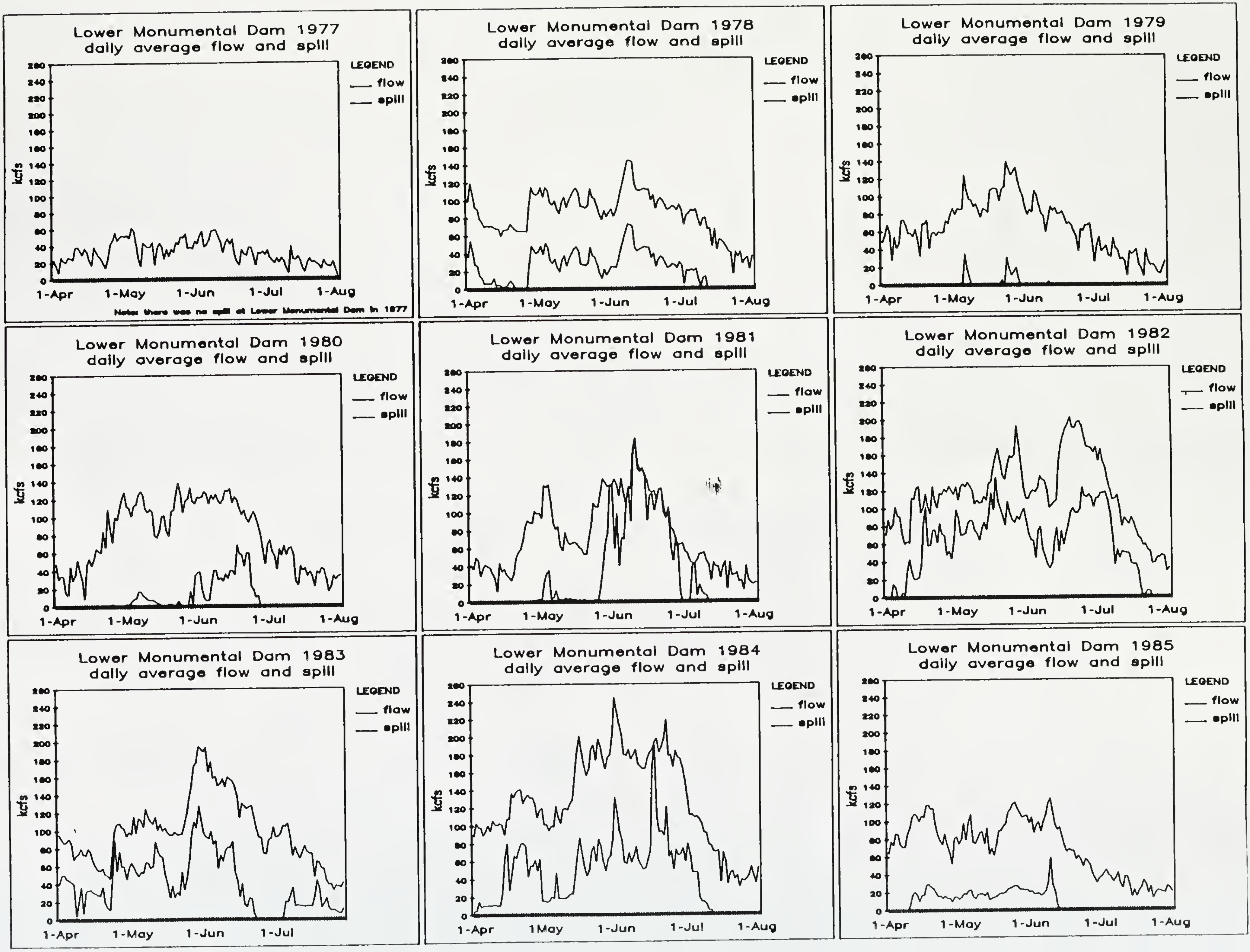


FIGURE 4

Lower Monumental Dam 1977 daily average flow and spill

Note: there was no spill at Lower Monumental Dam in 1977

Lower Monumental Dam 1978 daily average flow and spill

Lower Monumental Dam 1979 daily average flow and spill

Lower Monumental Dam 1980 daily average flow and spill

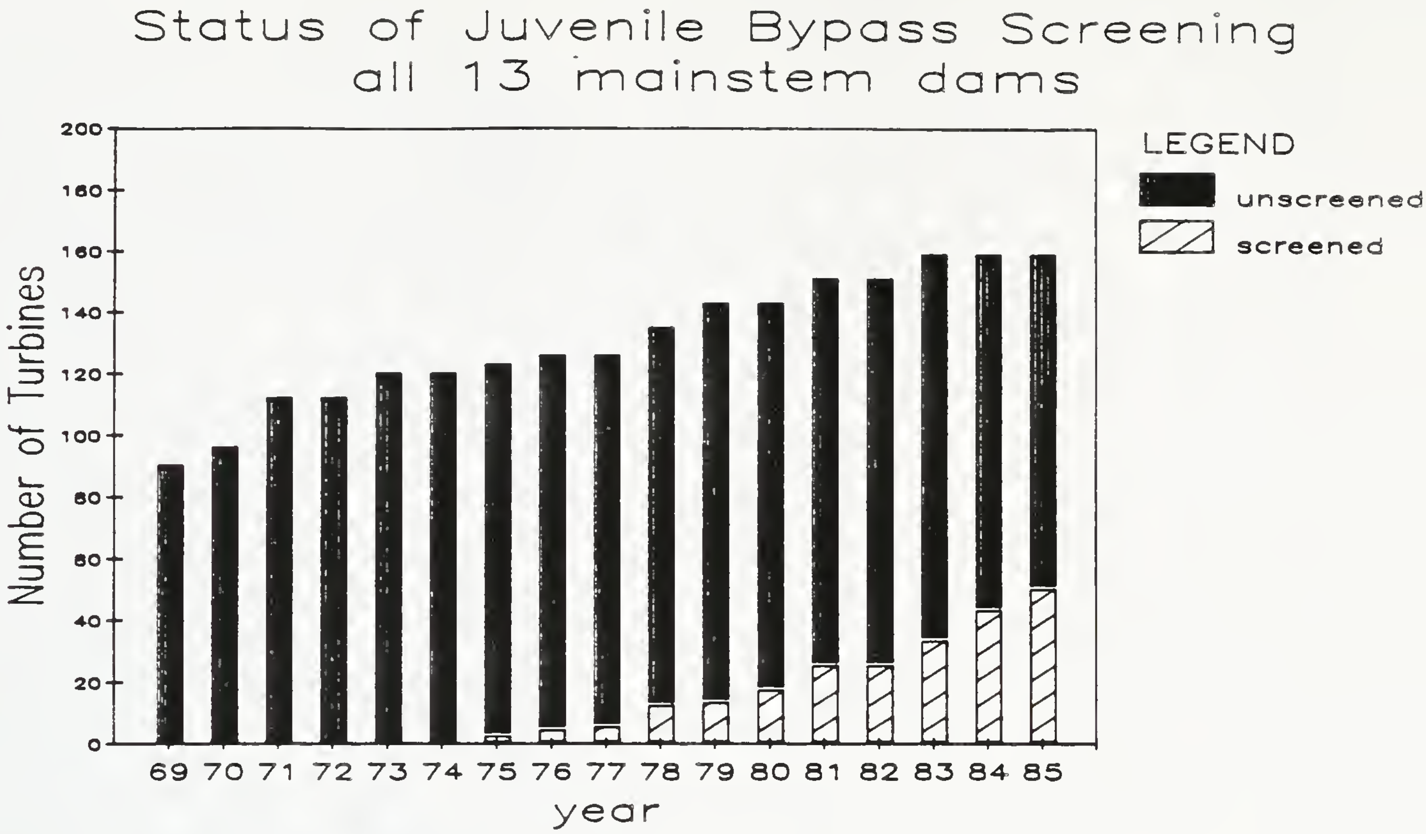
Lower Monumental Dam 1981 daily average flow and spill

Lower Monumental Dam 1982 daily average flow and spill

Lower Monumental Dam 1983 daily average flow and spill

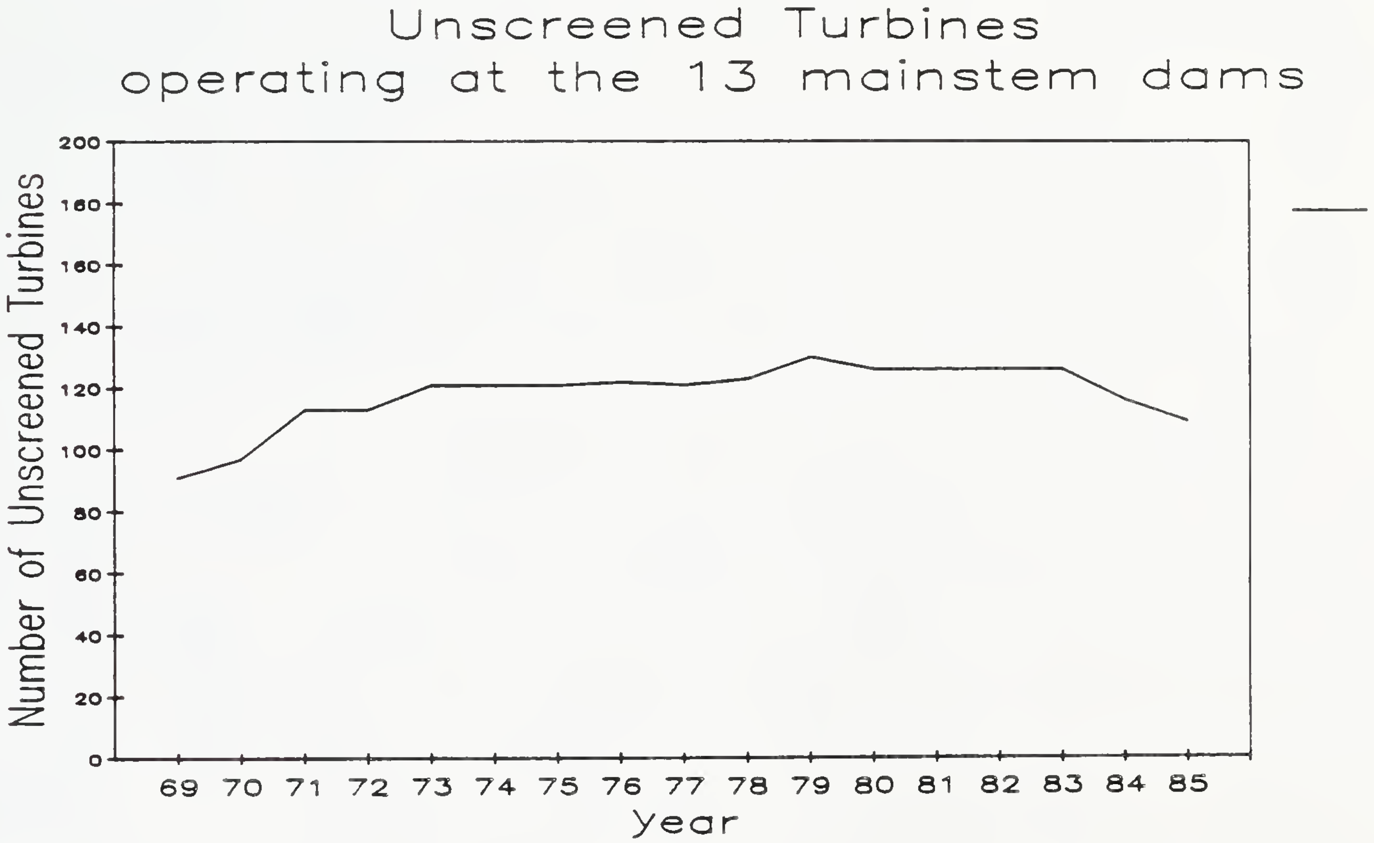
Lower Monumental Dam 1984 daily average flow and spill

Lower Monumental Dam 1985 daily average flow and spill



Status of Juvenile Bypass Screening
all 13 mainstem dams

FIGURE 5



Unscreened Turbines
operating at the 13 mainstem dams

FIGURE 6

Section 3: Conclusions and Recommendations

- There has been very little progress toward achieving the equitable balance and co-equal treatment for fish and wildlife that the fishery agencies and tribes had hoped for and thought the Act would provide. The fish and wildlife agency and tribal seat-at-the-table in system planning and operational decisions has not been occurred. Instead, the Federal project operators and regulators (including BPA) are attempting to implement the fish and wildlife provisions of the Act and the Program by assuming fisheries management authorities.

- As a result we are about where we were before in terms of providing flows of sufficient quality and quantity to improve production, migration and survival of salmon and steelhead. The potential progress promised in the Water Budget, namely management of a volume of water by the fishery agencies and tribes for maximum fish survival and priority for fish flows above refill and non-firm power, has not been carried out in implementation. Furthermore, recent reinterpretations of the Water Budget measures by the Bonneville Power Administration will further undercut efforts to maintain sufficient flows for fishery purposes. Specifically, treatment of the Water Budget as a limit to the amount of flow that will be provided for fish regardless of flow conditions ignores the fact that the size of the Water Budget was determined based on the amount of water that could be provided in a critical low flow year while still meeting all power purposes including refill.

- In the case of the Act's mandate to provide for improved survival of salmon and steelhead at hydroelectric facilities the results are mixed. While there have been no facilities built under the Act or the Program that were not already planned in 1980, we have seen some movement toward the development of juvenile fish bypass facilities at several projects. This has been particularly evident in the case of the Mid-Columbia PUD projects where FERC orders or negotiated agreements accepted by the FERC have resulted in agreements on both facility requirements and schedules. At the Corps projects slippage from schedules now in the Program is more the trend. The Corps has even submitted formal amendment recommendations to the Council that would delay further bypass facility development another 2-3 years beyond the target completion dates now in the Program.

- Interim spill programs to improve survival at these hydroelectric projects have also had mixed results.

Again at the Mid-Columbia projects progress is much more evident although there has been no change at Rocky Reach, substantial backsliding at Rock Island, and there is still no summer spill program at any PUD project. The spring spill program at the Corps' dams while realizing a slight improvement in 1985 has been undercut as a result of the Council's February 1986 amendment process and is about where it was in 1980 (unless this happens to be a critical year in which case we can expect juvenile fish spills at Corps projects greater than we would otherwise have experienced). The expected summer spill program at Corps' projects in 1986 represents a substantial improvement.

- While this report may conclude that the Act and the Program have not led to any substantive improvements in the survival of salmon and steelhead affected by the development and operation of the Columbia Basin hydroelectric system, the basic tools which they both provide should not be underestimated. With the exception of the February 1986 amendment, the Power Planning Council has provided strong support in the Program for the initiatives of the fishery agencies and tribes to improve survival. For example, in recent contract disputes between the Fish Passage Center and BPA concerning the Center's role in spill management the Council supported the fishery agencies and tribes and amended the Program to explicitly include spill management among the duties of the Water Budget Managers. The Program also specifies that the Water Budget should have priority above secondary power and refill, that the spill objective of 90 percent survival is a minimum rather than a maximum, and that the development of juvenile fish passage facilities at all projects (except Rock Island) should be aggressively pursued.

- Thus it should be recognized that things could be worse. There is some possibility that the February 1986 amendment was a turning point for the Council. There are other examples, most notably in the Council's current process for the development of production objectives, indicating that the Council is beginning to treat the fishery agencies and tribes in the same way that the project operators do. That is they are themselves beginning to develop the capability and the willingness to challenge the fishery agencies and tribes on the appropriateness or soundness of the biological objectives inherent in their recommendations, rather than accept the agencies and tribes as the knowledgeable (and legally responsible) entities on such matters. This is inconsistent with the specific provisions of the Act requiring that the Council give deference to the "expertise, and legal rights and responsibilities" of the agencies and tribes.

- It must be recognized that this is not simply a question of who is in charge. There are serious limitations to the available scientific knowledge regarding the effects of the hydroelectric system on salmon and steelhead, and on how best to manage those resources in light of those impacts. Many of the uncertainties are due to natural fluctuations and can not be expected to be resolved to the point that would allow for strictly data-based decisions.

- In similar situations in other disciplines, the response is to be conservative. The Corps' assumptions on flood control, or BPA's assumptions on firm power, for example, are extremely conservative. What we are now seeing in implementation of the Fish and Wildlife Program, however, is the re-interpretation of available fisheries data by the power interests to assure that all of the risk stays on the side of fish and wildlife. The incremental benefits of varying assumptions within the range of available data are then compared with the revenue loss estimates or reservoir impacts that are based on their very conservative assumptions. The fishery agencies and tribes on the other hand recognize and respect the expertise and authority of the project operators to make what assumptions they deem necessary in the fulfillment of their obligations.

- Until recently, the Council had respected the deference to the fish and wildlife agencies and tribes required by the Act and had refrained from trying to become what Congressman Dingell referred to as a "superfish and wildlife agency." The February 1986 amendment, however, was counter to that practice.

- The package of amendments currently under consideration is loaded with recommendations that will affect juvenile fish survival, including measures affecting flow, spill, bypass development and fish transportation. The Council decisions on these amendments could be affected by this change in the approach to decisionmaking.

- The fishery agencies and tribes must encourage the Council to support timely and effective implementation of existing measures.

- The fishery agencies and tribes must advocate an appropriate role for themselves in Program implementation.

MD/MK

DEPARTMENT OF THE ARMY
NORTH PACIFIC DIVISION, CORPS OF ENGINEERS
P.O. BOX 2870
PORTLAND, OREGON 97208-2870

April 3, 1986

APR 1986

REPLY TO
ATTENTION OF:

Water Management Branch

Mr. Robert Saxvik, Chairman
Northwest Power Planning Council
Suite 1100, 850 SW Broadway
Portland, Oregon 97205

Dear Mr. Saxvik:

I am writing to advise you of our Coordinated Plan of Operation (CPO) for Water Budget implementation for juvenile fish during the period April 15 through June 15 as requested in Section 304(c)(2) of your Fish and Wildlife Program. The CPO is the combination of several proposals and is attached as enclosure 1.

The runoff this year is expected to be better than critical. Therefore, a CPO was developed that may provide more water than specified in the Water Budget. In particular the CPO provides an average weekend flow of at least 85,000 cfs to transport juvenile fish in the mid-Columbia when the average weekly flows are expected to be greater than 110,000 cfs even though the Water Budget Managers are not requesting Water Budget.

Since the plan does not fully reflect agreement of the parties, providing weekend flows in future years is subject to further study because of potential impacts on both power and fishery resources. Therefore, it appears to us appropriate that the Council continue to support research to define these impacts as soon as possible.

Sincerely,

George R Robertson

George R. Robertson
Brigadier General, U.S. Army
Division Engineer

Enclosures

CF:
Water Budget Managers
BPA
USBR-Boise
PNUCC
IPC
NWPP
FERC

AUG 08 1986

COLUMBIA BASIN FISHERY AGENCIES AND TRIBES

FISH PASSAGE CENTER
825 N.E. 20TH AVENUE • SUITE 336 • PORTLAND, OR 97232-2295
PHONE (503) 230-4099

MEMORANDUM

TO: The Record

FROM: Mal Karr

DATE: May 6, 1986

SUBJECT: Progress on BPA/IPC Agreement on Brownlee Participation in Water Budget

Mitch Sanchotena, ISSU, called about 9:00 a.m. to relay a discussion he had with Bob Stahman, IPC, relative to the subject agreement.

Two negotiation meetings have been held to-date. According to Mitch, IPC wants an agreement and has made several modifications, but BPA remains reluctant to accept the IPC version and IPC does not like several of the provisions BPA is holding out for, namely:

1. BPA is unwilling to replace "in-kind" energy but, rather, wants to replace power loss during low-load hours.

2. BPA wants Brownlee contributions to be monitored as a "storage account" controlled by BPA, rather than a "water budget" controlled by the water budget managers, which would allow BPA to manage the water more for power than fish.

3. BPA will not agree that Dworshak should be participating at the same time but, apparently, views the "storage account" as something it can use at will to benefit power.

4. BPA will not guarantee that releases from Brownlee to augment flows for fish will be passed through LWG and down through the Lower Snake if that is not to the advantage of power production, and IPC is not willing to participate without assurance that the water will be used to enhance fish survival.

It is my understanding that another negotiation meeting has been scheduled, and IPC will continue to press for an acceptable agreement to be executed in the near future.

I have a call in to Bob Stahman to confirm this discussion and to get more details.

12:30 Discussion with Bob Stahman, IPC

Bob was very reluctant to discuss the negotiation meetings with me and repeatedly said that I would have to talk to Mark Maher to get BPA's perspective.

From IPC's view, according to Bob, all power issues have been resolved to IPC's satisfaction. The one remaining big issue is that BPA wants all reference to the water budget deleted and IPC, for the moment at least, wants assurance that its voluntary releases will be used to protect fish. Bob said that, if the final agreement is from the power concept only, IPC participation will be only at its discretion and only if such participation is to its benefit.

cc: Jim Ruff, NPPC
John Platt, CRITFC
AFPC ✓ DD
CBFWC Working Group

331.86MK

86 1656

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE ARMY
NORTH PACIFIC DIVISION, CORPS OF ENGINEERS
P.O. BOX 2870
PORTLAND, OREGON 97208-2870

July 17, 1986

REPLY TO
ATTENTION OF
Environmental Resources Branch

Mr. Robert W. Saxvik
Chairman, Northwest Power Planning Council
Suite 1100
850 SW Broadway
Portland, Oregon 97205

Dear ~~Mr. Saxvik~~: Bob

At our 24 June 1986 meeting you asked if I could further accelerate the juvenile fish bypass construction program at our mainstem Columbia and Snake River projects. At that time I said that our schedule was already on a "fast-track" given our best estimate of the time it would take to adequately study, design and construct the bypass facilities. However, in a positive effort to meet your request, I have had my staff thoroughly reexamine our bypass program schedule.

The enclosed table summarizes the results of that review for fish facility improvements at the Lower Snake, McNary, and The Dalles projects. You will note that we have the potential to move completion of the work at Lower Monumental and Ice Harbor projects ahead by one year. At Lower Granite and Little Goose we achieve partial completion one year early and at The Dalles project we maintain the existing schedule. This will require concurrent study review and construction design which is contrary to the Corps' accepted planning procedure. I want to emphasize that accomplishment of the accelerated program is also necessarily contingent upon study approval and upon funding for those actions not included in our FY 87 Congressional budget submittal.

We recognize your expressed desire, as well as the recommendations of the fishery agencies and tribes, to have bypasses at all projects. However, our studies show the most biologically and economically effective method of protecting the fish migrating out of the Snake and Columbia Rivers is full transportation at Lower Granite and Little Goose projects as well as direct hatchery pickup at Lyons Ferry Hatchery. This is in lieu of constructing additional bypasses at Lower Monumental and Ice Harbor projects. The reports prepared by the Corps for construction approval will document this finding. Accompanying that, I will need your rationale supporting construction of bypasses at Lower Monumental and Ice Harbor projects to make the report as complete as possible.

In this regard, I would again urge you to include a full transport program measure in the amended fish and wildlife program. We are aware that the scientific data supporting transport has been the subject of argument regarding the statistical variability in specific tests. From a decision-making standpoint, however, the data to support full transport are the "best scientific information available." They give more credence to full transport than does the data supporting other bypass actions such as spill. We understand your request to have additional bypass systems at the Lower Snake River projects based upon noneconomic factors. We do not, however, believe that it should be carried out in lieu of the full transport program which has been shown to be the most highly cost-effective means of protecting the fish.

JUL 18 1986

I appreciate the opportunity to work with you. It is my sincere wish that a cooperative spirit will be maintained among the many involved agencies and tribes in our commitment to protect our fish runs in a reasonable and balanced manner.

Sincerely,

George

George R. Robertson
Major General, U.S. Army
Division Engineer

Enclosure

TABLE 1

FEATURE	PROJECTS									
	L. GRANITE		L. GOOSE		L. MONUMENTAL		ICE HARBOR		MCNARY	THE DALLES
	EXIST	ACCEL	EXIST	ACCEL	EXIST	ACCEL	EXIST	ACCEL		
PGE Test	Complete		Complete		Complete except for report		FY87[1]	FY87[1]	NA	Complete except for report
Fixed Deflector	FY87[2]	FY87[2]	NA		NA		NA		FY86	NA
Longer Screens	NA		Dependent on Granite and Dalles Studies		Not incrementally justified		Not incrementally justified		Not being studied	Feasibility Study complete Oct 86
Gate Raise Mod (Start Const)	FY87	FY87[3]	FY88	FY87[3]	Included under perm. STS		Included under perm. STS		NA	Included under perm. STS
Units Oper. FY88	1	1	0	1						
FY89	6	6	5	6						
FY90			6							
Perm STS (Operational) (Includes reqd. Mods)	NA		NA		FY91	FY90[4]	FY91	FY90[5]	NA	General Letter[6] Report 1 Oct 86
Holding and Loading facilities	NA		Start constr FY87 Operational Spring 89		Study not made, being considered.		NA Not justified		Feasibility study[7] start Sept 86 Start constr May 90 Operational Spring 92	Study not being considered.
Fish Barges[8]	Submit Recon Report Jul 86 Const start FY88 Operational CY89 Spring run.									

Earliest test, spring '89, of extended STS

Super/Sub Script Notation for Table I

1. Testing has to be completed prior to submission of feasibility report. Results of economic analysis shows FGE improvement not incrementally justified. Approval required by Headquarters U.S. Army Corps of Engineers (HQUSACE) may not be forthcoming because of not being incrementally justified. Analysis shows full transportation to be the only economically justified solution. Reconnaissance report being forwarded to HQUSACE requesting approval to test. Presently no funds are programmed in FY87 for test facilities.

2. Approval action required by HQUSACE. NPD forwarded report in April 86 requesting approval to proceed with acquisition and installation of test facilities only. Decisions for approval and funding have not been made.

3. Request will be forwarded to HQUSACE to include Little Goose work with that of Lower Granite; however, additional funds will be required. Work is economically justified, but no decision by HQUSACE on a construction start has yet been made.

4. FGE facilities are economical when considering spill in the economic analysis; however, under the full transportation condition, the work is not justified. The feasibility report has to be approved by HQUSACE; and, because of the advantages of full transport, it is anticipated HQUSACE will be reluctant to approve the installation of FGE improvements, unless the work is fully supported and justified. In order to meet the accelerated schedule (if the feasibility report should be approved and funds made available) the necessary engineering for feature design memorandum and plans and specs would have to be started now prior to approval or possible disapproval of the feasibility report. This action is contrary to Corps regulations and will require approval by higher authority. If the work is later disapproved there will be lost design effort.

5. FGE facilities are not economically justified under existing conditions of operation; full transportation further reduces benefits. The feasibility report would have to present a strong position, beyond economics, to obtain HQUSACE's approval for the FGE improvements. In order to meet the accelerated schedule, engineering efforts must be started before the feasibility report which is contrary to Corps regulations, and will require approval by higher authority. In the event that feasibility report is approved and providing funds are made available, we will be ready. If later disapproved, the engineering will be lost effort.

6. Once the general letter report has been approved we will evaluate program.

7. Until the reports have been submitted, this is the best schedule developed at this time.

8. Applicable to projects with loading facilities. Included under Lower Granite for convience.

APPENDIX H

Auditor's Report

PACIFIC NORTHWEST ELECTRIC POWER AND CONSERVATION PLANNING COUNCIL

AUDITORS' REPORT

FINANCIAL STATEMENTS
and
SUPPLEMENTAL INFORMATION

September 30, 1985

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- Reconciliation of Expenditures to BPA Awards 13

MOSS ADAMS
CERTIFIED PUBLIC ACCOUNTANTS

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1400 Orbanco Building
Portland, Oregon 97204-1152
Phone: (503) 242-1447

Offices in Principal Cities of
Washington, Oregon and California
Internationally, Moores Rowland Intl.

To the Members of the Council
Pacific Northwest Electric Power and
Conservation Planning Council

We have examined the statement of assets, liabilities and fund balance of Pacific Northwest Electric Power and Conservation Planning Council as of September 30, 1985, and the related statements of activity and fund balance and changes in cash balance for the year then ended. Our examination was made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

As described in Note 2, the Council's policy is to prepare its financial statements in accordance with Office of Management and Budget Circular No. A-34 Section 25.1 D which provides for the recognition of awards sufficient to discharge accrued expenses and contractual commitments of the fiscal period and the recording of contract commitments as liabilities even though the contractual obligations have not been completed. These practices differ in some respects from generally accepted accounting principles. Accordingly, the accompanying financial statements are not intended to present financial position, results of operations and changes in financial position in conformity with generally accepted accounting principles. This report is intended solely for filing with regulatory agencies and is not intended for any other purposes.

In our opinion, the financial statements referred to above present fairly the assets, liabilities and fund balance of Pacific Northwest Electric Power and Conservation Planning Council as of September 30, 1985, and the results of its activities and the changes in its cash balance for the year then ended, on the basis of accounting described in Note 2, which has been applied in a manner consistent with that of the preceding year.

Moss Adams

Portland, Oregon
December 6, 1985

PACIFIC NORTHWEST ELECTRIC POWER AND CONSERVATION PLANNING COUNCIL

STATEMENT OF ASSETS, LIABILITIES AND FUND BALANCE

SEPTEMBER 30, 1985

ASSETS

Cash	$ 419,632
Awards receivable (Note 2)	778,518
Travel advances and other receivables	2,353
Prepaid expenses and other assets	32,834
Property and equipment, at cost (Note 2):	
Furniture and equipment	1,249,675
Leasehold improvements	27,116
	1,276,791
Less accumulated depreciation and amortization	(494,254)
	782,537
Deposits	7,900
Total assets	$2,023,774

LIABILITIES AND FUND BALANCE

Accounts payable	$ 423,842
Accrued payroll, payroll taxes and employee benefits (Note 3)	303,402
Contracts payable (Note 2)	625,990
Commitments and contingencies (Notes 3 and 4)	-
Fund balance	670,540
Total liabilities and fund balance	$2,023,774

The accompanying notes are an integral part of these financial statements.

PACIFIC NORTHWEST ELECTRIC POWER AND CONSERVATION PLANNING COUNCIL

STATEMENT OF ACTIVITY AND FUND BALANCE

YEAR ENDED SEPTEMBER 30, 1985

AWARDS AND RECEIPTS (Note 2)	
Bonneville Power Administration awards	$6,150,092
Interest income	35,455
Total awards and receipts	6,185,547
EXPENSES (Note 2)	
Personal services salaries	2,352,917
Professional services contracts	1,512,522
Office supplies and services	609,177
Payroll taxes and benefits	532,317
Travel	440,341
Facilities rent	225,639
Depreciation and amortization	206,700
Equipment rent and maintenance	142,415
Publicity	79,322
Professional fees	31,236
Disposal of property and equipment	24,975
Employee recruiting	10,691
Miscellaneous expenses (net)	(3,045)
	6,165,207
EXCESS OF AWARDS AND RECEIPTS OVER EXPENSES	20,340
FUND BALANCE, September 30, 1984	650,200
FUND BALANCE, September 30, 1985	$ 670,540

The accompanying notes are an integral
part of these financial statements.

PACIFIC NORTHWEST ELECTRIC POWER AND CONSERVATION PLANNING COUNCIL

STATEMENT OF CHANGES IN CASH BALANCE

YEAR ENDED SEPTEMBER 30, 1985

INCREASES TO CASH	
Awards and receipts	$6,185,547
Proceeds from disposal of fixed assets	6,350
Decreases in assets:	
Travel advances and other receivables	8,409
Prepaid expenses and other assets	104,697
Deposits	5,595
Increases in liabilities:	
Accrued payroll, payroll taxes and employee benefits	31,665
Contracts payable	9,479
Total increases to cash	6,351,742
DECREASES TO CASH	
Expenses	6,165,207
Less expenses not requiring cash:	
Depreciation and amortization	(206,700)
Disposal of property and equipment	(24,975)
Other	(13,675)
	5,919,857
Increases in assets:	
Awards receivable	200,984
Property and equipment purchases	323,165
Decreases in liabilities:	
Accounts payable	67,308
Total decreases to cash	6,511,314
DECREASE IN CASH BALANCE	(159,572)
CASH BALANCE, September 30, 1984	579,204
CASH BALANCE, September 30, 1985	$ 419,632

The accompanying notes are an integral part of these financial statements.

NOTES TO FINANCIAL STATEMENTS

SEPTEMBER 30, 1985

NOTE 1 - ORGANIZATION

The Pacific Northwest Electric Power and Conservation Planing Council was established by the Pacific Northwest Electric Power Planning and Conservation Act as enacted by the Congress of the United States on December 5, 1980.

The Council, which consists of two representatives from each of the four states of Idaho, Montana, Oregon and Washington, is charged with developing a comprehensive long-range plan for meeting the electric energy needs of the four-state region. This plan is to be developed in accordance with the priorities as set forth in the Act; namely, (1) conservation, (2) renewable resources, (3) co-generation, and (4) other resources. The Council is also specifically charged with establishing a program to protect and enhance the fisheries resources of the Columbia River System as well as balancing the energy needs and resources of the region with environmental considerations.

The Council has developed the Columbia River Basin Fish and Wildlife Program, which was adopted November 15, 1982, and the Northwest Conservation and Electric Power Plan, which was adopted April 27, 1983. The Council is now directing its efforts to the implementation and revision of these programs at both the regional and state levels.

As provided by the Act, the Bonneville Power Administration pays from its available funds the compensation and other expenses of the Council for the performance of its functions and responsibilities relating to the Act. Bonneville is required to pay Council expenses up to an amount that shall not exceed 0.02 mill per kilowatt hour (kwh) of forecasted firm power sales for the year to be funded. However, funding may be increased up to 0.10 mill per kwh of forecasted firm power sales in any year upon a showing of need by the Council. The actual expenses for the year ended September 30, 1985 were $6,185,207. For the same period the Council's initial budget was $6,738,000, with $1,813,000 allocated for the operations of State Councils. This budget was subsequently increased to $7,038,000 reflecting additional expenses for the fish and wildlife plan.

Under current Federal and State income tax regulations, the Council is exempt from income taxes. Therefore, no amount is provided for Federal and State taxes on income in the accompanying financial statements.

NOTE 2 - BASIS OF PRESENTATION AND ACCOUNTING POLICIES

Awards and Receipts and Expenses - The Council accounts for awards and receipts and expenses in accordance with Office of Management and Budget Circular No. A-34 Section 25.1 D. Awards from Bonneville Power Administration, to the extent they do not exceed an approved budget, are recorded in an amount necessary to discharge all expenses and contractual commitments for each fiscal year. Professional service contract commitments are recorded as liabilities and expenses at the time performance contracts are entered into. Accordingly, Bonneville Power Administration has set aside fiscal year 1985 funds in an amount sufficient to satisfy the accrued expenses and contracted commitments of the Council at September 30, 1985. The Council believes that this policy, which varies from generally accepted accounting principles in that awards are recorded before they are received and contractual commitments are recorded before the obligation has been incurred, best represents the ongoing activities of the Council at the end of any fiscal period.

Other receipts and expenses are recorded either when earned or when the obligations are incurred.

Cost Allocations - Three of the member states follow a direct cost method of allocating expenses whereby all expenses of the State Councils are paid directly by the Council. The other state follows an indirect cost allocation method whereby various costs are accumulated and allocated on an equitable basis to all agencies incurring such costs, including the Council. Allocation rates are based upon the percentage relationship of the indirect cost pool to salaries and fringe benefits. The indirect cost allocation rate, which varies depending upon the expenses included, is applied to actual salaries plus fringe benefits to arrive at the allocated indirect cost.

Furniture and Equipment - The cost of furniture and equipment is being depreciated over the estimated useful lives of the assets using the straight-line method. Estimated useful lives range from three to five years.

Leasehold Improvements - The cost of leasehold improvements has been capitalized and is being amortized over the lives of the applicable leases.

Professional Service Contracts - As provided by the Act, the Council has contracted with several independent third parties to conduct certain studies or provide specific services in conjunction with the development of the long-range plans. As of September 30, 1985, the Council had entered into contractual commitments having maximum remaining balances aggregating $535,446.

NOTE 3 - COMMITMENTS

Compensated Absences Commitments - Several employees of the State Councils held positions with various state agencies prior to being employed by the Council. As a condition of their Council employment these employees were allowed to retain vacation, sick leave, and other compensated absences accrued at the time of their Council employment. In addition, compensated absences have been earned since the date of employment on the same basis as with previous state agency employers. The balance of these employees' accrued compensated absences as of September 30, 1985 was $116,215. It is reasonably possible that some of these individuals will remain in state government upon separation from the Council. Therefore, their accrued vacation, sick leave, and other compensated absences, in an amount that would approximate that which they had available when first employed by the Council, will be retained by a successor agency. These amounts have not been reflected as an accrued liability and expense in the accompanying financial statements as the ultimate liability to the Council cannot be estimated.

Because the accrued liability and expense for compensated absences of Central Council employees can be reasonably estimated are non-transferrable, and payment is probable, a liability in the amount of $114,146 has been recorded in the accompanying financial statements.

Operating Lease Commitments - The Council rents office space and equipment under operating lease agreements. Future minimum lease payments for all operating leases having initial or remaining noncancellable lease terms in excess of one year are as follows:

YEAR ENDING SEPTEMBER 30,	
1986	$ 78,101
1987	187,442
1988	187,442
1989	187,442
1990	187,442
Later years	31,240
	$859,109

Total facilities and equipment rent expense for the period ended September 30, 1985 was $368,054.

NOTE 4 - COUNCIL LITIGATION

As of September 30, 1985, the Council was involved in litigation in which groups were appealing the enactment of certain sections of the Northwest Conservation and Electric Power Plan. The petitioners request a permanent injunction against certain programs provided in the plan and that other programs be remanded to the Council for correction.

In addition, the petitioners are requesting reimbursement for legal fees incurred in conjunction with the suit. Council management and legal counsel are of the opinion that the likelihood of an unfavorable outcome and/or a resulting liability is remote. Therefore, no provision for loss as a result of this litigation has been recorded in the accompanying financial statements.

SUPPLEMENTAL INFORMATION

MOSS ADAMS
CERTIFIED PUBLIC ACCOUNTANTS

To the Members of the Council
Pacific Northwest Electric Power and
Conservation Planning Council

Our examination was made for the purpose of forming an opinion on the basic financial statements taken as a whole. The accompanying combining statement of assets, liabilities and fund balance, combining statement of activity, and schedule of actual expenses and capital outlay compared to budget are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information has been subjected to the auditing procedures applied in the examination of the basic financial statements, and in our opinion, are fairly stated in all material respects in relation to the basic financial statements taken as a whole.

Moss Adams

Portland, Oregon
December 6, 1985

PACIFIC NORTHWEST ELECTRIC POWER AND CONSERVATION PLANNING COUNCIL

COMBINING STATEMENT OF ASSETS, LIABILITIES AND FUND BALANCE

SEPTEMBER 30, 1985

	CENTRAL COUNCIL	OREGON	WASHINGTON	IDAHO	MONTANA	ELIMINATIONS	COMBINED
ASSETS							
Cash	$ 381,670	$ 6,661	$ -	$31,301	$ -	$ -	$ 419,632
Awards receivable	778,518	92,916	90,536	(421)	27,283	(210,314)(1)	778,518
Travel advances and other receivables	703	-	-	370	1,280	-	2,353
Prepaid expenses and other assets	30,834	-	2,000	-	-	-	32,834
Property and equipment:							
Furniture and equipment	1,133,510	14,026	58,433	17,738	27,968	-	1,249,675
Leasehold improvements	12,937	-	-	7,850	6,329	-	27,116
Accumulated depreciation and amortization	(428,803)	(7,255)	(16,291)	(17,956)	(23,949)	-	(494,254)
	717,644	6,771	40,142	7,632	10,348	(210,314)	782,537
Deposits	7,900	-	-	-	-	-	7,900
Total assets	$1,917,269	$106,348	$132,678	$38,882	$38,911	$(210,314)	$2,023,774
LIABILITIES AND FUND BALANCE							
Accounts payable	$ 326,199	$ 18,808	$ 57,383	$ 7,050	$14,402	$ -	$ 423,842
Accrued payroll, payroll taxes and employee benefits	248,999	13,768	9,104	20,462	11,069	-	303,402
Contracts payable	528,259	67,001	26,049	1,589	3,092	-	625,990
Due to state councils	210,314	-	-	-	-	(210,314)(1)	-
Fund balance	603,498	6,771	40,142	9,781	10,348	-	670,540
Total liabilities and fund balance	$1,917,269	$106,348	$132,678	$38,882	$38,911	$(210,314)	$2,023,774

---

(1) To eliminate inter-Council receivables and payables.

PACIFIC NORTHWEST ELECTRIC POWER AND CONSERVATION PLANNING COUNCIL

COMBINING STATEMENT OF ACTIVITY

YEAR ENDED SEPTEMBER 30, 1985

	CENTRAL COUNCIL	OREGON	WASHINGTON	IDAHO	MONTANA	ELIMINATIONS	COMBINED
AWARDS AND RECEIPTS							
Bonneville Power Administration awards	$6,150,092	$426,028	$368,261	$490,079	$310,157	$(1,594,525)(1)	$6,150,092
Interest income	35,455	-	-	-	-		35,455
Total awards and receipts	6,185,547	426,028	368,261	490,079	310,157	(1,594,525)	6,185,547
EXPENSES							
Personal services salaries	1,612,235	118,535	163,246	284,957	173,944		2,352,917
Professional services contracts	1,176,765	227,354	77,486	2,704	28,213		1,512,522
Office supplies and services	503,900	9,678	41,124	41,013	13,462		609,177
Payroll taxes and benefits	373,398	47,050	29,862	55,607	26,400		532,317
Travel	238,657	17,011	47,369	83,283	54,021		440,341
Facilities rent	192,679	4,723	-	20,098	8,139		225,639
Depreciation and amortization	181,623	2,577	11,287	4,769	6,444		206,700
Equipment rent and maintenance	142,415	-	-	-	-		142,415
Publicity	79,322	-	-	-	-		79,322
Professional fees	31,236	-	-	-	-		31,236
Disposal of property and equipment	21,429	-	3,546	-	-		24,975
Employee recruiting	10,691	-	-	-	-		10,691
Miscellaneous expenses (net)	(5,257)	40	270	34	1,868		(3,045)
State allocations	1,594,525	-	-	-	-	(1,594,525)(1)	-
Total expenses	6,153,618	426,968	374,190	492,465	312,491	(1,594,525)	6,165,207
Excess (deficiency) of awards and receipts over expenses	$ 31,929	$ (940)	$ (5,929)	$ (2,386)	$ (2,334)	$ -	$ 20,340

PACIFIC NORTHWEST ELECTRIC POWER AND CONSERVATION PLANNING COUNCIL

SCHEDULE OF ACTUAL EXPENSES AND CAPITAL OUTLAY COMPARED TO BUDGET

YEAR ENDED SEPTEMBER 30, 1985

	ACTUAL	BUDGET	ACTUAL UNDER (OVER) BUDGET
Personnel costs	$1,985,633	$2,074,000	$ 88,367
Contracting	1,176,765	1,673,000	496,235
Other operating expenses and capital outlay[1]	1,266,946	1,206,000	(60,946)
Travel	238,657	272,000	33,343
State Council allocations[2]:			
Idaho	490,029	510,000	19,971
Montana	310,157	420,000	109,843
Oregon	424,783	471,000	46,217
Washington	368,261	412,000	43,739
	1,593,230	1,813,000	219,770
	$6,261,231	$7,038,000	$776,769

---

[1] Other operating expenses and capital outlay include:

Operating expense	$1,163,295
Furniture and equipment purchases	306,703
Less depreciation expense and loss on disposal of assets	(203,052)
	$1,266,946

[2] State Council allocations include:

Expenditures as per financial statement	$1,606,114
Furniture and equipment purchases	15,739
Less depreciation and loss on disposal of assets	(28,623)
	$1,593,230

PACIFIC NORTHWEST ELECTRIC POWER AND CONSERVATION PLANNING COUNCIL

RECONCILIATION OF EXPENDITURES TO BPA AWARDS

SEPTEMBER 30, 1985

Total expenditures			$6,165,207
Non-expenditure items funded through BPA awards:			
Property and equipment purchases			323,165
Other asset and liability changes:			
	1984	1985	
Total assets	$ 2,029,598	$ 2,023,774	
Less net book value of property and equipment	(711,072)	(782,537)	
	1,318,526	1,241,237	
Total liabilities	(1,379,398)	(1,353,234)	
Net changes	$ (60,872)	$ (111,997)	(51,125)
Financial statement expenditures not requiring cash:			
Depreciation and amortization			(206,700)
Loss on disposal of property and equipment (net of proceeds of $6,350)			(31,325)
Other items			(13,675)
Total revenues			6,185,547
Less interest income			(35,455)
BPA award receivable:			
Beginning of year			577,534
End of year			(778,518)
Cash received from BPA for fiscal year 1985			$5,949,108

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